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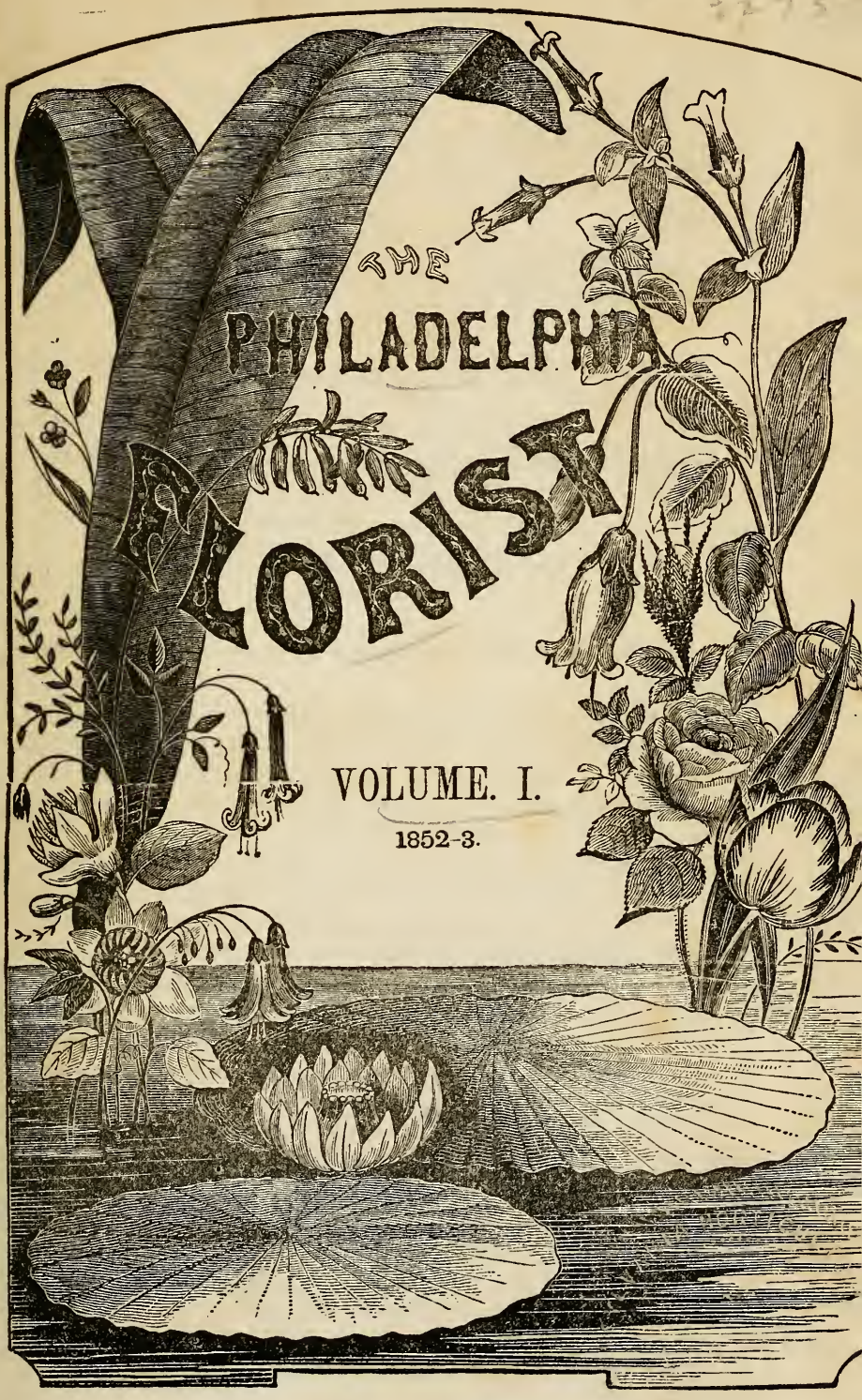
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THE

PHILADELPHIA FLORIST

AND

HORTICULTURAL JOURNAL,

A MAGAZINE OF

Horticulture, Botany, Agriculture, and the Kindred Sciences.

Conducted by a Committee of Practical Gardeners. R. ROBINSON SCOTT, Editor, No. 48 S. Third Street, above the Girard Bank, up stairs.

VOL. I.] PHILADELPHIA, MAY, 1852. [No. 1.

NATURAL SYSTEM OF BOTANY:

ITS SUPERIORITY.

Read at the Stated Meeting of the Pennsylvania Horticultural Society, March 16.

The legitimate duty of any society being to take advantage of all plans whereby the objects for which it has been founded may be aided or facilitated, I have taken the liberty to offer a few suggestive remarks on the superiority of the natural system of classification in the vegetable kingdom over the Linnæan or artificial. The opinion of most persons is settled upon the matter, who are at all acquainted with Botanical science; and many who are encouraged to abandon the old landmarks which the great Swede had set up, by men who have tested the efficiency of each, and the high character and novelty of this comparatively modern system—are at a loss to know why the natural systems of JUSSIEU, or DECANDOLLE, or LINDLEY, or ENDLICHER are so much extolled as an infinitely superior means of acquiring a knowledge of the mass of objects which comprise the vegetable creation—why the efforts and achievements of the venerated Linnæus should be depreciated, or his scheme superseded, and his system which first cast light upon the apparently confused mass of individuals which comprise the Vegetable Kingdom, should, after so much service, be cast aside to give place to what appears an intricate and difficult means of obtaining the necessary information, viz: the technical name of a plant. Could I, a working gardener, "unsifted in such perilous circumstance" as the disputes of scientific devotees, who know nothing of nature but from actual contact and observation, aided of course by a little reading and enquiry, could I open up to view the gratification

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and knowledge which I have acquired from my slight study of this natural system, and the complete disappointment and dissatisfaction experienced in wading through the *Diandria* and *Diadelphia* of Linnæus, and his *Diœcia* and *Syngenesia*, I think I should obtain for DECANDOLLE and JUSSIEU a little more consideration, and yet allow no disparagement to their great original—for Linnæus himself had the rudiments of a natural system in his hands when nature lost her great expounder. And here it may be conceded, that since the object of any system of classification is to aid in imparting knowledge procured by actual observation of nature, and the opening up of some channel whereby the knowledge of great minds may be conveyed to the less extensive intellects, and the finite and contracted mind of man may aim at a knowledge in detail of the infinity and unlimited provision of Providence for his pleasure and use—that system must be considered the most useful which accomplishes this object in the simplest and most satisfactory manner, no matter if it were the emanation of a Brahmin or a Turk. We are informed by Scripture history, that at the Creation all creatures received a name; that a distinctive term was appropriated by our progenitor to each object which holds a place in the family of nature, for man's convenience in his journey through the material world. Could these original names (simple undoubtedly they were,) have been handed down to us preserved or even modified, how great a saving of labor, of anxiety, of earnest investigation, and of oppressive study. But in the gradual corruption of society, men looked away from the simple charms of nature and her creation, and forgot the uses as well as the beauties of these gifts of a provident Father. Yet in the midst of the corruption of vice and apathy, of sensual indulgence, an inherent desire of discrimination springs up in the human intelligent being—a desire to know why springs up the blade of grass or stalk of corn true to its time and place and individuality—to what purpose the nutritive potato lies imbedded in the earth—matter stored up in its fleshy tuber, and the poisonous Tapioca, or Cassava plant *Jatropha Manihot*, or *Manihot utillissima* contains in its organization a deadly poison, disappearing when reduced by the arts to an article of food; why the sugar cane should contain in its cells true sugar so useful in animal economy, and comprise with the sugar maple and beet, a storehouse for the chemist. But examples are infinite as nature herself. And then the variety of size, and form, and coloring, and smell, who has defined—*who can define*, their laws or limits, from the gigantic Banyan *Ficus Indica*, and the venerable Baobab or Monkey bread, (*Adansonia digitata,*) of the tropics, not forgetting the sturdy Oak: to the Chaffweed of Britain—(*Centunculus minimus.*) the minute speedwell and dwarf willow, which are produced on Alpine summits. Men born with an innate spirit of enquiry and dis-

crimination, began to admire and regard these offsprings of a common parent; nor more startling to Galen, was the appearance at his foot of the first human skeleton he had seen, than no doubt was, to Humboldt and Bonpland, to Linnæus and Park, the majesty of the gigantic inhabitants of the forest of tropical climates, or the minute objects which at times riveted their attention in their journeyings over the arid plains, the still and humid jungles and cold mountain tops, whither their thirst for science had led them. And who can behold the uncouth forms of Cacti, which adorn the sandy plains of Central America, and in some cases wander into the fields of an adjoining State, without admiring the variety of forms which comprise the Vegetable Kingdom, and the still more interesting orchids or plant animals, which hanging from trees, seem to contend in form with the gaudy flies that flock around them. Many of these now adorn the plant houses of your vicinity, which, while they astonish and please, instruct the humble student of Nature. Man, the reasoning steward of God's creation, preserves, encourages, and loves these objects his co-partners in the great field of life. A key is required to make the study intellectual, to read the Book of Nature. God has told Linnæus, Decandolle, Humboldt, to write the history, and they with a host of others have obeyed the summons.

I now come to the consideration of the practical portion of this enquiry. It has been proved by experience that the simple plan devised by Linnæus, is useless as a means of classification, that it conveys nothing more to the student than a comparative fact, of trifling moment. Unites dissimilar individuals, and separates those already united, by the natural perceptive faculties of the mind. Who would for a moment think of enumerating in the same category, the *Poa annua*, (annual meadow grass,) which annoys the Gardener by springing up every where within his privileged domain, and the Polycarporn tetraphyllum, or All seed, so rare in gardens and so dissimilar in habit and form, or still greater anomaly the Arundo Donax, with its tropical aspect, and strong stems with the *Holosteum umbellatum*, so minute and characteristic of a temperate climate. Who would expect to find a majestic and stately tree the congener of the minute herb, as we find it in the Natural System? the enquiring student who studies structure we answer! for in the most perfect modification of that scheme, first indeed suggested perhaps, by Linnæus himself, or at least at a very early period in his Fragments of a Natural System, we in it find a complete description of the entire plant, its roots, stem, leaves, stipules,, petioles, bracts, peduncle, inflorescence, calyx, corolla, petals, stamens, ovary, fruit and seeds; following still further its embryo, with its surrounding albumen, if any be present, and the germinating processes hilum, micropel, radicle, plumule; but we cannot pretend to

enumerate the multitude of perfect and minute parts, which make up the perfect and minute whole. We must exclaim with the Poet—"These are thy wondrous works Parent of good, Almighty! Thine this universal frame, thus wondrous fair; Thyself how wondrous then."

Penn. Hortl. Society, R. R. SCOTT.

Stated Meeting, March 16th, 1852.

To the Editor of the Florist.

STATISTICS OF HORTICULTURE.

BY DUNS SCOTUS.

MY FRIEND:—You ask me what position gardening and floriculture had attained 25 years ago about Philadelphia. I can give you the facts so far as my memory serves me, and allow you to draw your own inferences, which you are very capable of doing from your keen perception, tact, extensive and well founded horticultural knowledge, obtained in the best botanical schools in Europe; with your additional experience on this side of the Atlantic. *Twenty-five years ago!* How times are changed!! There were then only five nurseries where pot plants could be obtained in this vicinity, Bartram's, McMahon's, Landreth's, Maupay's and Hibbert's. There were three *Tea Gardens*, Birch's, Smith's and McAran's. With regard to private greenhouses in the city proper: Messrs. Longstreth's, Pepper's, Coleman's and Peirpont's I believe embraced the whole, the two former gentlemen only, kept gardeners. I presume I am not far astray, when I state, that there are now more trees and plants sold in one week in this city and county than the entire combined stock of these public and private collections. Such a sight as flowers at the corners of the street was not then thought of. A small plant of the daily rose sold at one dollar. Camellia flowers, for the hair, at one dollar and fifty cents each. The country seats which had any pretensions to good gardening and which possessed a greenhouse were those of Messrs. Pratt, Hamilton, Gratz, Clapier, Butler, Breck and Girard. About this very period horticulture and the love of flowers began to be very generally infused amongst those of refined taste, especially amongst ladies. D'Arras, gardener to the Hamiltons, and Hibbert the Florist were looked upon as the great growers of the day. The Pennsylvania Horticultural Society was regenerated and its first exhibition in 1829, gave a fresh impulse to the art till Philadelphia is now the city of fair fruits and flowers.

[TO BE CONTINUED.]

"THE PHILADELPHIA FLORIST."

To the Editor:—A work like the one you project is a want long felt, and I congratulate you on the merit of endeavoring to supply it. The midland States require an organ of intercommunication, while the residents of all towns and cities feel much the absence of a cheap horticultural work, wherein the information necessary to the management of their few flowers or small garden plot may be obtained. While endeavoring to make your Magazine interesting to the practical gardener, and useful to the scientific man, you will at the same time undoubtedly be well rewarded by the increased interest which your endeavors will give to the city lover of flowers, and in the assistance which you will give to the management of our small city gardens. There is a large field for a Horticultural Magazine. I believe that the proprietor of a few window flowers, or a small garden in a town, derives far more pleasure from his possessions than many do who live in the country--certainly far more interest is taken in them; and if things be valued in proportion to their rarity, it is natural and is as it should be.

I have been led to these considerations by so often having to answer the enquiries of citizens respecting their floral favorites; and I propose to offer you a few remarks occasionally on window and town gardening, which I trust will be serviceable and seasonable. So far as Philadelphia is concerned just now, much cannot be done. As I am writing this, the snow is six inches deep, and promises to continue; whenever opportunity offers however, attention should be paid to the pruning and trimming of vines and shrubs. There are few gardens in towns, no matter how small, which do not possess some of these.

The Rose is a universal favorite everywhere. It is deservedly so; but its beauties are enhanced by skilful pruning. This season Jack Frost has been rather too officious, and Roses in many places have considerable portions of them killed; all dead wood should at once be cut away. There are several kinds of roses generally grown in small gardens; each kind requires a separate system of pruning. For general use the rule is best which requires the division to be in two classes: those of a strong and those of a weak habit of growth. Roses of a weak habit may have their last year's shoots cut into three or four eyes of the place whence they started. If the stronger growing kinds are so treated, they will produce only shoots again; these should be shortened to about two-thirds their length, and the weak shoots cut out entirely. If the space appropriated to a strong growing rose be limited, one-half the strong shoots may be cut down to an eye or two, and the rest left at nearly their whole length. This, while affording abundance of flowers, will afford shoots for another season,

when those which have flowered may be cut away in the same manner as the former were. No manure is too strong for the Rose—the richer the ground, the finer the flower.

The Grape Vine, like the Rose, is a necessary accompaniment to every garden; generally these are pruned by practical gardeners, and are all "fixed" by this time. Where they have not been, they should be at once attended to. There are two objects to be attained here, namely: the covering of the trellis with healthy shoots; and secondly, that of anticipating a good proportionate crop. As a general rule, the weaker the last year's shoot, the closer it may be pruned; a weak one for instance, may be pruned to one eye, and a strong shoot to three-quarters its length. If the shoots are very abundant, thin out some of them. It is very late, however, to prune grape vines; they will probably bleed—and many gardeners do not like this; but it will not hurt them. THOMAS MEEHAN.

Strict attention will be given to the important department our friend speaks of, under the head of "Window and Yard Gardening." [Ed. FLORIST.

The Theory and Practice of Pruning,

BY THOS. HUTCHINSON, OF PHILA.

A knowledge of the principles and practice of pruning is one of the many necessary qualifications to a gardener. We often see trees pruned in such a manner that, to say nothing of their beauty being destroyed, what is of more importance the chance of a crop of fruit, is cast aside. While not unfrequently again we observe trees killed outright, or forced into an excessive growth that endangers the crop of several successive years. Perhaps the pruning of fruit trees is of all others, the most important. And to this part of the subject I shall then endeavor to (as well as I am able,) give a theoretical and practical explanation of the questions. Why do we prune? When should we prune? To prune then is either to increase the strength of the shoots or diminish it, or to reduce the shoots in number. To prune in order to produce wood shoots, or to prune to produce fruit buds. When a portion of a healthy plant is cast off, all that sap which would have been expended in supporting the part removed is directed by the vital force into the parts remaining, and especially those parts in the immediate vicinity of that part from which it has been removed. Thus—if the leading bud of a growing branch be stopped, the lateral ones, which otherwise would have remained dormant are forced to *push*, as gardeners term it. If a growing branch is shortened, the lowest eyes which seldom *push* are brought into

action, hence the necessity of cutting a useless branch entirely out, otherwise the cutting of one leads to the production of many other superfluous and useless ones. This is not a universal principle—sometimes the first effect is to produce an accumulation of sap in a certain branch, which is forced into the remaining buds and there stored up against a future year. In ordinary cases it occurs that by this means, short or bearing branches, or *spurs* are obtained in great abundance. The cultivators of the Filbert (*Corylus Avellana*,) procure by this practice a greater abundance of bearing wood, than nature unassisted would furnish. For as the hazel nut or Filbert is always borne on the wood of the previous year, it is desirable that every bush should have as much as could be obtained of that wood (to this consideration all others are sacrificed;) and such is readily obtained by observing a continued system of shortening the young branches of two-thirds, the effect of which is to force all the lower buds into growth the successive year and thus each shoot of bearing wood produce many others.

The effect produced upon one part by the abstraction of another thus shown, is the development of buds, which would otherwise have been dormant. This may be shown in many other ways; thus if all the fruit of a plant is taken off one year after its formation, the fruit will be finer and more abundant the year following, which naturally occurs when late frosts destroy our crops; if of many flowers only one is left, that one fed by the nourishment intended for all the others becomes so much the finer. And also of two unequal branches, the stronger is shortened and stopped in its growth, the other becomes stronger; and this is one of the most useful effects connected with pruning; because it enables a skilful cultivator to equalize the growth of all parts of a tree and as has already been stated is one of the most important consequences of the operation; for example, we may say that a seedling tree has a hundred buds to support, and consequently the stem grows slowly and the plant is stunted; but being cut down so as to leave only two or three buds, these push with great vigor and it becomes luxuriant. Nothing is more strictly to be guarded against than the disposition that some plants have to bleed, such as the vine and some climbers that are very milky, &c. when pruned, to such an extent as to threaten them with total exhaustion. It is also not unfrequent in fruit trees with gummy mucilaginous secretions, such as the plum, the peach and other stoned-fruits. This property arises from the large size of the vessels, which vessels are unable, when cut through, to unite sufficiently to close their apertures, and so long as the roots continue to absorb their fluid contents from the soil so long will this emission take place; and if it is allowed to go on, the system of the plant

becomes so much deranged, that it either becomes very unhealthy or dies. The only way to avoid this difficulty is not to wound such trees at the time their sap begins to flow, but to prune early and thus give sufficient time for the sap vessels to close. This shows how extremely necessary it is to perform the operation of pruning with care. The first thing to be thought of is the peculiar nature of the plant under operation, and the manner in which its special habits may require a special mode of pruning. For example the fruits of the walnut and fig is borne by the wood of the same season. That of the filbert and peach of the second season, and the pears and apples on the wood of several years growth—so that it is perfectly clear that of those three kinds each will require a distinct plan of pruning for fruit. The pruner has also another object in view than that of thinning the branches, so as to allow the free access of air and light to the fruit. If this purpose is wisely followed out by merely removing superfluous foliage the end attained is useful.

[TO BE CONTINUED.]

THOMAS HUTCHINSON.

FOREIGN GRAPES.

DESCRIPTIVE LIST.

PREPARED FOR THE PHILADELPHIA FLORIST, BY JAMES POWELL.

MR. EDITOR:—I will cheerfully furnish you the list you desire of Vines that I can describe from actual observation of such as have been under my charge. I think you can rely on the descriptions at all events as Philadelphian. J. P.

April 10th, 1852.

No. 1.—Black Morocco—young wood reddish, smooth, foliage rather large, dark green with lobes, these deeply serrated; footstalks long crimson colored. Bunch, large, rather loose. Berries large, oval, of a dark red or purple color, thick skin, sweet pleasant flavor, large and hangs a long time on the vine—*second rate.*

No. 2—Black Hamburg—This well known grape scarcely needs description, as it is the one commonly grown for a general crop under glass, (in this country) being one of very best (if not *the* best) either as regards a certainty of crop or flavor; young wood of a light green color, smooth. Foliage light green, broad, and smooth on the upper side. Bunch, above medium size, with short shoulders. Berries good size, roundish, oval and deep purple when ripened, but when the vine is burthened with too much fruit it never assumes that fine dark color so much admired, but has a reddish hue, and then become what is commonly known as the RED HAMBURG.

There are doubtless a great many seedlings from this grape or sports from vines in peculiar soils and situations. These have had names bestowed on them to please the fancy, and sometimes the vanity of embryo cultivators or enthusiastic amateurs, but so near the present that they do not merit the distinction. Such are the RED HAMBURG, HAMPTON COURT VICTORIA, FRANKENTHAL, OR FRANKENDALE, &c., &c.

3.—Black Ferrar—Young wood dark green, smooth, foliage, light green lobes not deep, irregular serrated; foot stalks short and rough. Bunch loose, berries large, oval, black, thick skin, sweet flavor, very similar to *Black Morocco*, No. 1.

No. 4—Bishop—Young wood reddish, foliage dark green with fine deep lobes, (botanically quinquefid or pentifid) deeply serrated; pubescent, (dark crimson) foot stalks. A very strong grower, (which I consider not worth cultivating,) bunch large loose; berries reddish, purple, large, oval, thick skinned, flesh fine, sweet, differs little from *Black Morocco*, No. 1.

JAMES POWELL.

Philadelphia, April 10th, 1852.

The importance to amateurs and even practical gardeners of a useful descriptive list of Foreign Grapes is so generally conceded, that we cordially write observations upon Mr. Powell's list as it appears. It will be continued in future numbers.—Ed.

The Patriarchs of Horticulture and Botany.

The tomb of Old Flanders' family of the Tradescants is dilapidated, and the admirers of ancient Botanical spirit and enterprise intend restoring it. Who does not know Tradescantia, or spider plant, discolor and T. Zebrina? Why the latter is all about. I saw a plant of it luxuriating in a window in Poplar street a few days ago, in the north-east portion of the city. But more, the Tradescants introduced many North American novelties to Britain before Bartram's day; even one of the HACAMATAI or TACAMAHAE, (*Populus alba*,) and the FOX GRAPE and MARVEL OF PERU, (4 o'clock.) Will not gardeners perpetuate even in Britain, the glory of their order. Subscriptions will be received by Sir W. Hooker, at Kew, for the above purpose. Alas, gardeners are poor men. Of John Bartram's memory we shall speak again.

☞ The Botanical name, Hactshish, about which there is something in the papers, is not properly spelled; 'tis *Cannabis Indica*, not Cannabris. The common Hemp of commerce is Cannabis sativa, a plant of the natural ord. Urticacea of Linde, and of course partaking of the strong diuretic properties of the common nettle, Urtica dioica, so much used as a vegetable in Ireland, and very medicinal.

NATURAL SCIENCE.

"Methodum intelligo naturæ convenientem quæ nec alienas species conjungit, nec cognatas separat."—*Raii Sylloge, præf., p.* 15.

BOTANY—SYSTEMS OF CLASSIFICATION.

Much inquiry begins to be made as to the best system of Botany to study by beginners; we should say begin by all means with the most useful and most complete, the fullest, most perfect and withal the most easily understood and applied. But this leads us at once to the important discussion of the merits of the several systems now before the scientific world; if it seem desirable, however, let the matter be fully and fairly discussed, and to this end I propose the question:—

What system of Botanical classification is the most perfect and commendable? We shall receive any communications on the subject which may be offered, and meanwhile will prepare a paper ourselves.

FACTS IN POPULAR BOTANY.

The Ground Nut of the fruit shops is the *Arachis hypogea* of authors, called *Munduli* by the Negroe and others, a plant included in the N. O. Leguminosæ, or *Pod plants* (the Fabacæ of Lindley—) to this Nat. Order also belongs the sensitive plant which being furnished with a peculiar petiole, or leafstalk, droops when touched by any object; a superstitious idea was attached to this seeming phenomenon, known no doubt to many of our fair readers. The common annual sensitive plant is *Mimosa pudica* of authors; another species is called *sensitiva*—not an annual, of more robust habit, and not so sensitive as *pudica*; another species less sensitive than either, but more beautiful, is called *Mimosa prostrata*, a green-house trailer. The scarlet sorts are familiar to amateurs in this neighborhood, having once been connected with the *Acacia* genus or family. The *Cream Nut* or Brazil Nut—a triangular rough nut, sold in the shops of your city, is the produce of *Bertholletia excelsa* of authors, a lofty tree of Brazil. The most lofty tree of the old Brazilian forests, is said to be one which belong to the same Natural Order as the Brazil nut, namely *Lecythis Ollaria*. The cannon ball tree also belongs here, called so from its round, large seed. Drinking vessels similar to the calabash, are made from the fruit of one of these trees, and many parts of them are used by the natives in their domestic economy. The name of the Order is LECYTHIDACEÆ—no doubt a difficult name for a child to get around.

The Ginseng of commerce is procured from a plant called Aralia, some of its congen are natives of the United States—of the Nat. Ord. ARALIACEÆ. Aralia is a peculiarly striking and majestic plant to be found growing at Bartram's garden, near the wooden bridge over the Baltimore Rail Road.

Cochineal used to color various materials, cheese amongst others, is procured from the Cochineal insect, which luxuriates, and *hangs on to Opuntia Cochinilifera*, one of those *Cacti* by the way which we may see at the next annual exhibition for the society's medal; these Cacti are sharp and spiny dogs. Visnaga is not to be sneezed at, at least not to be touched by the nasal organ with impunity—it was once at Kew in all its deformity five tons weight. The old fellow stank, and was cast out and trodden on.

"Imperious Cæsar dead and turned to clay
May stop a hole to keep the wind away."

Vanilla which gives its flavor to ice cream, is obtained from the seed pods of an Orchid, N. Ord. ORCHIDACEAŒ, a most varied and interesting group of nature's most outlandish creation is these same Orchid tribe. Native Botany shall have a large share of our attention; as yet the woods and wilds have not donned their vernal clothing; when such takes place we shall be there.

Entomology.—The season unusually backward, has left our enthusiastic friends in this department nothing to communicate; any stray flies which may appear, will I have no doubt fall into their traps, for some of them are cute ones, and always about. Digging has not been much proceeded with, therefore nothing could be observed in that way—we shall see what a few weeks will do.

☞ The few Spring days brought out a few flies, and as was apprehended they are caught. Vanessa Antiopa, a butterfly, black wings, with a yellow margin, seen in Fourth street below Chestnut, on the 15th—and a moth—Macroglossa sp., caught at Kingsessing. I shall be on the look out and commmunicate from time to time. W. H.

Agriculture.—On this important subject we must be brief yet convinced of its paramount interest and importance, we shall zealously watch for any hint calculated to benefit those who hope to derive some information from our pages in connection with farming operations. The interest that continues to be manifested in regard to the Bureau of Agriculture, now in contemplation, gives hope to the Agricultural student, of some means being provided for his improvement and instruction. We can number amongst our best friends and correspondents, Thos. Kirkpatrick, M. D., head Agricultural Inspector to the Board of Education in Ireland, whose report for the year 1850 and 1851, is now before us. John Donaghy, Esq., superintendent Model Farm, Glasnevin, Dublin, Ireland—Alexander Campbell, Horticulturist to the National Board of Education, Ireland, and many others of standing in this science. Many of the men who are now in charge of Model Farms in Ireland are our personal friends, and will supply information on every branch of this engrossing subject.

We solicit communications from the farmers around us, statistical and general, with plans of cropping, and feeding, nature of soils in the different districts of this state; quality of the breed of cattle, &c., &c., in order to give some idea of the actual state of Agriculture in this country. We shall be ready to answer any inquiry on the subject of Agriculture to the best of our ability. In our next number we shall furnish a few extracts from the report of the Agricultural Inspector, Ireland, for the years '50-51.

INDICATIONS OF THE CREATOR IN THE VEGETABLE KINGDOM.

In the great procession of the events of the moral universe, and the silent but not less beautiful sequence in the natural world, we are determined by the constitutions of our minds to view all in the order of cause and effect; or at least of antecedent and consequent, for some deny the reality of cause altogether, admitting only the notion of time or succession in the relation of any two events. Whether there is any power in the antecedent to produce the consequent, is a metaphysical question which is foreign to my present object. The notion of cause is all but universal. In the simple curiosity of the child, and the more enlightened reflections of the man; in the rude Indian, who hears the voice of the Great Spirit in the deep-toned thunder, and the philosopher who asks what power originated and sustains this great theatre of our existence? Whence comes this idea of causation? Is it a primary idea—the product of the universal reason, rising spontaneously in the mind of every child? Or is it the result of intimations from without, associated with the notions of time? On the first hypothesis, the idea of a first cause is direct, intuitive, an indestructible fact, or state of human nature. On the second, it is the result of reflections upon the phenomena outside of the soul. It is the last analysis, *the* cause of which all other causes are effects. If we do not accept the first theory, our argument for a first cause must consist entirely of the inference of cause from effect. If we do admit this theory that the idea of a first cause is innate or primary, the argument from effect to cause is by no means unnecessary, for it supports the other in a very satisfactory manner.

In the arrangement of the external world, we observe the most perfect adaptation of means to ends. In this we see contrivance, and we know nothing of contrivance but as the result of intelligence. Thus comes the idea of a great intelligence, which may account for all known phenomena. Now let us look at plants to see what indications they afford of the great first cause. The position of the vegetable kingdom—its relations to the other departments of nature, affords

very powerful evidence of a great, intelligent, designing Mind. To see the force of this point, we should endeavor to obtain enlarged, comprehensive views of the universe. It is only by surveying the parts separately, then by a higher effort of mind seeking to grasp the whole, that we can arrive at those subtile, beautiful, endless relations which bind all things into one great whole, and forever stamp them as the productions of one Great Mind. The chemical constitutions of plants is the same as that of animals; and indeed, all their elements are found in inorganic nature. Then the form of the ultimate particles, of which plants and all matter is composed, is probably the same. Now just conceive of the material universe reduced to these homogeneous particles, all chaotic, motionless, clear. What but an Infinite intelligence could lodge the rocks in their silent dwelling place, build the mountains on their everlasting foundations—clothe their naked limbs with garments of beauty; or send the ox to browse at their feet, and the eagle to perch on their heads. The vegetable kingdom holds an intermediate position. There is inorganic matter on the one hand, and the highest form of organization, the animal, on the other. Now the inorganic is evidently to be regarded as a means to something ulterior. Its office is to form a theatre and a substance, which by combination with the principle of life, curious and beautiful orders of being are to be formed. But animals cannot be formed directly from and sustained by matter in the inorganic state. Their food must be organized. There then comes in the agency of plants; they stand in direct contact with inert matter, and transform it into a state which animals can assimilate. Now it seems unnecessary to point out the marks of design in this great arrangement. They are sufficiently obvious. The globe was evidently intended to sustain animal life, but this would be impossible without the mediation of plants. In the order of creation, plants preceded animals; what but Infinite intelligence could see so far—determine and arrange with such admirable precision. But leaving the boundaries of the kingdom, we find numberless instances of the most consummate skill within its own borders. For instance, in the structure of plants, what can be more striking than the simplicity of the elements, and the untold variety in the complicated results. A few little germs, differing but little in size and shape, constitute the elementary organs of all plants. But their combinations how various and beautiful! The root that penetrates the earth, the stem that extends into the atmosphere—the leaf that fans the element that surrounds it—the flower of every imaginable color, the delicate stamens and pistils—and the seed, the consummation of all. An architect can build houses of various forms, with the same bricks; but how few are his variations in comparison with the wonderful variety in the domain of Flora. How inferior his

fittings and joinings to the exact adaptations in the humblest plant—how stiff and inelegant the outlines of his works, compared with the perfect symmetry in every plant. The position assumed by the plants of the embryo in germination, is one of the most convincing proofs of skilful contrivance to be found in nature. Why does the radicle always seek the soil, and the plumula as invariably ascend into the atmosphere? Does gravity explain the phenomena? If it will account for the downward direction of the root, how can it account for the stem ascending into the atmosphere? Shall we with some, place it among the vital phenomena of vegetation? What is that but saying that the plant is so created, that its parts observe these respective directions; and what could so arrange this but Infinite wisdom and power? This fully accounts for the phenomena, and we know of nothing else that can.

Again look at the functions of the leaves, observe their perfect pneumatic structure, how nicely adapted to the various degrees of heat, light and moisture, to which they are exposed—when the situation is unfavorable to respiration, the leaves are fitted with this epidermis, and large active stomates, but when the situation naturally favors it, to too high a degree, it is counteracted by a thick leathery skin, and small stomates. In the case of leaves growing under water, the stomates are entirely absent. Why? simply because they could be of no use there.

In the clothing of buds we find evidence of striking adaptations. In trees natives of cold climates, the buds are formed during the summer, but they are not to be developed till the following spring. These buds are of the highest importance for they contain the rudiments of branches, leaves, flowers, fruit and seeds; they are very tender, now how are they to be preserved during the severities of winter? In this way nature has provided for them,—they are covered with scales adapted in number and thickness to the exposure of different species. The arrangement and packing of these scales is so perfect that art cannot imitate it. And this is not all, in some, as the horse-chestnut the whole is covered with a coat of gum, which forms a very powerful protection. The whole process of reproduction, offers many illustrations of the existence and care of the Creator. Look at the end—the perfection of the seed, observe it is indicated in every part of the process. The stamens and pistils are placed near each other, that the fertilising influence of the pollen may not be thwarted, and they are both matured at the same time for the same purpose. There is beautiful contrivance in the relative position of these organs, they are long or short, erect or drooping, and all for the one purpose of conveying the pollen to the ovules.

The constitution of the seed is one of the finest examples. The

seed is composed of the germ, and of provision both for its preservation and support in the first stages of growth. The embryo is one of the most brittle and tender substances, yet it is folded up in the most perfect security within the integuments and the albumen of the seed. So great is the conservative power, that seeds have been known to germinate, when more than a thousand years old. The preservative power prevents both decay, and untimely germinations. Before the germ can assume the active state, the preserving power must be overcome, and when it is no longer needed for that purpose, it subserves another not less important. Namely, the support of the young plant, before it can live by its own proper functions. All this is effected in the seed itself, which is a perfect laboratory.

I cannot close these remarks without noticing the large development of beauty in plants, that ethereal presence which lends such a charm to all material objects. Plants supply us with food, and this indicates the goodness of God. But they minister to higher wants, delighting the soul with their elegant forms, and their lovely colors. Now this beauty which is so profusely lavished on the daughters of Flora is far more than a rigid utilitarianism demands, and if we could suppose mere mechanisms to be the result of chance, we must look higher for the exquisite, artistic finish, which characterises all the members of the vegetable kingdom. It is needless to specify cases—the most important thing is to view the subject from the right point. Then is every fact we acquire, and every law we discover a testimony to the great doctrine we have been considering. Habit has so familiarized us with these beautiful objects, that many of us forget to bestow a thought upon them. We eat our bread, wear our linen, and sail the ocean in our majestic ships—without a recollection of the growth of the corn, the flax or the oak. Let us be more mindful in the summer that is opening upon us. May we draw from the study the consoling inference, that "If God so clothe the grass," He will not forget us, his rational creatures. Thus shall we rise from nature up to nature's God. J. M.

The Pennsylvania Horticultural Society.

There is "something" going on in the pages of the *Horticulturist* about our society, and societies in general. Several dangerous looking shells have exploded, but as yet no body seems to be much hurt. The war has already lasted three months, and to all appearance, "the end is not yet." Now, with every respect for the gentlemen engaged in this controversy, I do not see that there is much to found a difference upon. One gentlemen, "a working gardener of Philadelphia," does not consider the society absolutely perfect, believes it might

serve the cause of horticulture far more than it does, and that some ideas of his own would be advantageously adopted. In this opinion he probably does not stand alone, nor from his censure could any society be exempted. No society is perfect—there is always room for improvements, and each individual member of such societies, would be worth Barnum's attention, had he not some little idea of the superiority of his own ideas. But a society is not an individual, and *some* members must concede *something* in all detail matters. So far I do not see that our society is such a *very* scandalous affair. He considers that gardeners have no *direct* influence in the management of the society. This must be a misconception If so, I do not see that the society is to blame. No good gardener has, to my knowledge, ever been refused admission to membership in the society; every detail, no matter how small, is laid before the members assembled at each monthly meeting, the majority of whom are gardeners generally, and by them adopted or rejected. If any member, let him be a gardener or an amateur, or neither, have any suggestions to make they are always attended to. Now it seems to me, that if the arrangements of the schedule of premiums, are so very defective, and if such important improvements could be made in it, the society would have been proud to receive them when the schedule was proposed for adoption. It is neither fair, just, nor generous to sit quietly by in a meeting, assent (tacitly) to all that passes, and then come out with such a "did you ever!" before the world. Is it fair to condemn the usefulness of the society because plants "grown by the yard" are brought there? Does the society grow the plants? Does the society colour the grapes? I rather "guess" the society is better pleased with good specimens than with bad ones. Let the "working gardener" bring his Chiswick grown specimens there—it will be time enough then for the society to turn out the lean ones. Sam Slick tells us never to "*say* we can go ahead, but *go*." A clever fellow that same Sam—should like to see a few more of 'em. There are many things in the management of a society, which those who are not in its actual machinery deem objectionable, but yet would wear a very different aspect under other circumstances. Now with regard to gardeners not being on the committee—our friend considers this a great grievance—this is a matter of opinion. I, as a gardener, would rather be off them; I have never felt more ill at ease than when I have been on committees under which the inspection of my own things have fallen. So with regard to the designs—I have no doubt but that the majority of the members consider them most untasteful objects. But a society must be *pecuniarily* as well as *scientifically* successful, and if the committee of management err in deeming the designs important to these ends,

they would no doubt be glad to act on a better when pointed out to them. Some novelty or some show with the mass of the public seems to be necessary. Had not Mr. Cope's liberal contribution of the Victoria, been a good substitute for the absence of the designs usually there, I fear many of the citizens would have deemed the exhibition a failure last year.

THOMAS MEEHAN.

While our talented friend has changed the *Venue* in this cause, let us hope that he has not drawn an old house about our ears while yet in a state of helpless infancy, and still more anxiously let us hope for an impartial verdict on the merits.—Ed. P. Fl.

A few species of native plants are in bloom. Of these we may note—*Anemone thalictrioides*, (Meadow rue like Anemone.) The English name used for Anemone is wind flower; a pleonasm which we by no means admire or encourage. We shall do our best for those simple speaking persons, who eschew pedagogism, as a French friend of ours terms it. But we must preserve intact the fundamental rules of technical science, which so much facilitate the study of nature, and are so much valued by scientific minds. The technical language of chemistry is justly esteemed one of the greatest achievements of the human mind.

Our small friends are waiting for their turn in the list—these are *Droba verna*, early whitlow grass, so common everywhere in cultivated ground, with its minute size abundance of white and delicate flowers, and curious *siliquea* or pouch. Linnæus's system merges in the classification of the tribe, to which this plant belongs, into the natural system, for he takes into account the structure of the seed-vessel, and arrangement of the seeds. We shall explain this in the dissertation promised on the several systems of Botany. We have yet *Epigea repens*, a beautiful American plant, which will not be naturalized in Britain—at least it is with difficulty kept alive there from its peculiar habits, and the nature of its roots; it luxuriates only on its native soil, as nature intended it should. *Caltha palustris* has flowered already in the Jersey marshes; this is the May-flower of Britain, which the pent up citizens of their manufacturing towns collect when a day of respite is allowed him at the approach of spring. All love flowers if they knew it. We have yet *Saxifraga rupestris* in abundance; every one who walks into the country sees it; and *Claytonia Virginica*, and Symplo carpus fætidus or skunk cabbage—the roaches know this plant, I am told, by colored inhabitants of our vicinity, who sell it for the discomfiture of this pest of housekeepers. Next month we shall give more natives.

TRANSACTIONS OF SCIENTIFIC SOCIETIES.

LINNÆAN, BRITISH, MARCH 2d, ROBERT BROWN, Esq., in the Chair. A collection of specimens from the Herbarium of the late Dr. Sibthorp, illustrative of his tour in Greece, and collected by him, were presented by Dr. Daubeny. Mr. A. White exhibited specimens of the *Eurostus validus* of Dallas, captured by Fortune in Northern China. Attention was directed to the fact, that although the insect when dry was brown, when immersed in spirits of wine, it presented a beautiful green color. The importance of ascertaining the color before death was enforced, as many important characters are thus obtained which do not exist in the preserved specimens. A series of drawings from the Misses Harriet and Helena Scott were exhibited to illustrate the Entomology of Australia, a work by their brother; a paper by Mr. Swainson accompanied these accurate and beautiful drawings, confined chiefly to butterflies and moths—many rare species are found in Australia. A fruit of Araucaria Bidwillii, was presented; this tree a congener of A. imbricata, the Chili Pine, attaining a height of 80 or 90 feet in its native locality, with fruit as large as a (*common*) man's head, and quite as hard no doubt. Dr. Ths. Thompson elected a Fellow.—*Abridged from London paper.*

Entomological British, March, in our next.

BRITISH HORT. LONDON, MARCH 2nd, SIR C. LEMON, Bart. M. P. in the Chair.—Fellows elected, Lady D. Nevil and M. Sneyd, Esq. A curious *Cynoches* (Orchid,) was sent from Messrs. Rollisons, new to gardens, purchased at a sale; also from J. H. Schrœder's garden a collection of orchids, Cœlogyne cristata, covered with bloom; *Ansellia, Africana, Dendrobium Heyneanum* (white) best ever exhibited, *Epidendrum odoratissimum* and *Lycaste*, high colored *Var. Skinnerii.* A Knightian medal awarded. Messrs. Jackson, Nurserymen, for *Maranta sanguinea*, (one of the arrow root family,) a Banksian Medal. This is a South American plant, flowered for first time in England. Hayes of Edmonton, sent two single fringed seedling *Primula sinensis*, Chinese primrose; from Messrs. Veitch, a branch of Acacia dealbata, cut from a standard tree 20 feet high, at present in bloom at their Nursery—perfectly hardy tree S.E. of London. Messrs. Standish & Noble sent a new seedling, Rhododendron, in flower, named *R. ciliatum*, and really pretty, only 6 inches high, forced, hardy if grown out doors—a Banksian Medal awarded. A Cyclamen from Mrs. Atkins, Painswick, Gloucestershire, a cross between *Perdicum* and *Coum*—a certificate awarded. (There is such a var. in our vicinity. Ed.Fl.) A certificate awarded; a Ripley Queen Pine Apple, weight 3lb. 3oz. by Mr. Jones, gardener to Sir J. Guest, Bart. Bunches of black Hamburgh Grapes just ripened, from Mr. Mitchell Brighton; a certificate—(outdoor temp. at this time about an average of 40° Fah. Ed. Fl.—New "yellow crowned" Seakale, from Mr. Prestoe, gardener to E. W. Blunt, Esq., Kempshall Park, The Nepal Berberry was by far the most remarkable plant furnished; ashleaved *Berberis Nepalensis*, from London Hort. Society Garden, Chiswick, described from Oatacamund in the Neilgherries found by Fortune. Cuttings of fruit trees were distributed to Fellows of the Society; some plants were furnished from the Society's garden.—*Ib.*

Literary Department.

Without a little enthusiasm, the world would be at a stand still.—W. H. F.

Gardeners can read and write sometimes, and many know something of the literature of the day. A few are good Botanists, Musicians, Artists, Poets, Entomologists, and all are critics more or less. We propose then to indulge in the taste for literature at the expense of the mere practical gardener. Poetry and Flowers are closely connected. Without flowers we should have had little tasteful poetry; without poetry who could paint the flowers? How many have deified the Rose in verse—how many roses have the poets painted? The *Gorse*, or as the Highlander has it, the *whin*, or *furze* we are told, was almost worshipped by Linnæus; that is, he found in it another incentive to adoration of the God of Nature. Our fair readers, gentle and rosy-fingered, I hope, will grace this department with their chaste effusions; if not, we must appeal to the hard-handed mechanic, who in our need has already aided us with the following:

[For the Philadelphia Florist.]

The Lily, Rose, and Violet.

Who does not love these beauteous flowers?
Sweet ornaments of Nature's bowers;
What eye so stoical can view
Their dazzling white, and red, and blue,
And not think on the kindly powers
Which gave to earth these heavenly flowers?

I love all nature—from the trees
Which sigh and moan with evening's breeze,
To where the oak, with mighty crash,
Falls thundering 'neath the lightning's flash!
I love the floods, and rocks, and rills—
The gloomy glens and sun-lit hills—
The sun, and gales, and balmy showers:
But dearer far I love the flowers!

I love to see thee, lily, shine,
Yet my love's bosom's white as thine;
And underneath its hills of snow
A thousand fond affections glow—
A heart beats fond and true to me—
I love her better, flower, than thee!

I love thee, Rose, for thy bright flush
Is like my Mary's modest blush,
Beaming with truth and happiness,
As on her cheek I plant the kiss
Which tells of faith and fond devotion.
And love, deep, boundless as the ocean;
Yes, Rose, I love your beauties rare—
But far beneath my Mary fair!

I love thee, Violet, and why?
Because thou'rt like my Mary's eye,
When thy dear leaves are steep'd in dew,
And sparkle with their heavenly blue:
Then thou art like those orbs so bright,
Which beam on me with purest light;
Meek and more artless than the dove,
Reflecting deep and changeless love.

I love the Rose and Lily, yet
I better love the Violet:
For cheeks and lips may blush and smile,
And bosoms heave, and still beguile;
But rarely are eyes less that true
Whose color is that heavenly blue—
Especially if fringed with jet;
Yes, I best love the Violet.

J. C.

The Emigrant's Adieu.

Farewell, farewell! my Fatherland!
Before me lies the broad blue sea,
Whose waves will waft me far from thee.
The ship's afloat, the decks are mann'd—
But, ere I leave the hallow'd earth,
Where first this changeful life had birth,
My knees shall bend in prayer above,
To guard the country of my love.

Farewell, farewell! my Fatherland!
They say the sunny clime I seek
Will bring back freshness to my cheek,
By thousand odorous blossoms fann'd;
But what shall soothe my soul's unrest,
What cheer my sick and aching breast,
When, fond familiar faces gone,
I stand on foreign shores—alone!

Farewell, farewell! my fatherland!
Farewell, my mother's peaceful tomb!
Farewell ye flowers that round it bloom,
Which now I pluck with trembling hand!
Farewell, the scenes of childhood's glee,
Where step and spirit bounded free!
The village church—the sabbath bell—
Home, love, and country—fare ye well!

[N. M. Mag.

Labor's Cry--By a Laborer.

'Tis hard—'tis hard!—to wander thro' this cheery world of ours,
Beneath a sky of smiling blue, on velvet paths of flowers,
With music in the woods—nought there but pleasure known—
Angelic midst earth's solitudes, and yet with want to groan;
To see no beauty in the stars—in nature's sunny smile,
To feel accursed by misery, willing, but dare not toil—
There's burning sickness at my heart—I die for lack of bread;
God of the wretched, hear my prayer—I would that I were dead!

Heaven reigneth down its manna still, in many a golden shower,
And, feed with fragrant breath the leaves, with silver dew the flower;
There's honey'd fruit for bee and bird, with bloom laughs out the tree,
And food for all God's happy things, but none gives food to me.
Yet earth in plenty's garland crown smiles on my aching eye,
The purse-proud, chilled by luxury, disdainful pass me by;
I've willing hands, and eager heart, yet may not work for bread:
God of the wretched, hear my prayer—I would that I were dead!

T. G. M. Buckingham.

Armand Marrast, who was once a great man amongst the great men of France, was borne to an unhonored tomb by unhonored men, but one was there who knew him; who was not afraid to say he knew the Armand Marrast, of Feb. 1848. He spoke of him, as one injured Patriot might speak of a ruined comrade, spoke of him as a man, the great relationship of the world. No one can cavil at the *eloge funebre* of Lamartine, at the grave of Marrast! No one can help feeling that there is still some purity in the human mind! No one can call down on the soothed Republican leader, the wrath of a mock republican tyrant—they dare not so insult the tomb which they may wish to honor.—*Philopatria.*

Schools of Design, are evidences of refinement in all communities, they are numerous in France; there every schoolboy learns some branch of the fine Arts. There is a flourishing School of Desingn, in Dublin, the Metropolis of Ireland, and one in Belfast, the *Athens* of that Country. At a late examination in the Dublin Establishment, a premium of a copy of Prof. W. Harvey's, Sea-side Manuel, a treatise on the N. Ord., *Algæ*, or sea weeds, was presented to each successful Student by Lord Clarendon. These books were paid for out of the funds of the Committee of the Royal Dublin Society, and not presented at the expense of the Government, through Lord Clarendon Her Majesty's Representative, as has been erroneously stated.—*Correspondent of London Paper.*

☞ A large and influential meeting, was held at the Earl of Charlemonts, Dublin, for the purpose of organizing a testimonial to the memory of Thomas Moore Esq., the Irish Poet and Historian.

The Florist and Horticultural Journal.

Philadelphia, May, 1852.

OUR APOLOGY.

For what? Not for being what we are: a number of plain Philadelphia Gardeners, unaided by any friendly clique or influence of notable patrons. Not for trying to be what we are not; Authors instead of Workingmen. Not for venturing upon our undertaking without previously enlisted support, and trusting to the appreciation of the community in which we live for our patronage and support.—This would be to apologize for Philadelphia. Shall our apology then be for Philadelphia? Philadelphia as wanting in interest in Horticulture? *Old* Philadelphia, that boasted the first Green Houses on the American Continent, whose Bartrams, more than one, were among the first collectors of the world, and that was foremost, almost without competition in the great work of introducing the floral natives of the new to the old world, and naturalizing those of the old world the new. Or is it the Philadelphia of the Horticultural Socety, *still substantially the only* Horticultural Society of the Union that now founded twenty-six years, goes on with every year increasing in means and usefulness? Or *Modern* Philadelphia is it, the Philadelphia that sends its bouquets to the reigning belles of the whole Union; that supports they say its 1500 Gardeners and 5000 Garden laborers,—of whose florists one has over 20,000 square feet under glass; the city that imports so many varieties of exotics every year, and that is known to possess collections of rare and beautiful plants in value exceeding $200,000? Or are we to mean the Philadelphia of the past year, itself, that has seen the Victoria Regia blossom in glory—the past year in which we discover that two of our fanciers alone have paid the sum of $280 and $400 each, for exotics imported by them from Europe and introduced to the United States for the first time? Or the Philadelphia of the month in which we write, the Philadelphia of April 15th; when, at an entertainment given by a lady, one of the brightest ornaments of elegant and refined society, her drawing-room conservatory presented the most admirable spectacle of at least eight thousand dollars worth of flowers in full and perfect bloom. The foreigners who were there, admitted how few Palaces in Europe could array that charming sight. No! no, Philadelphia may be slow in publishing and proclaiming her own merits; but she never has been deficient in zeal for Horticulture!

Still why should we not be content to keep our mouth-pieces at the North, where they say they are getting to do all the talking and writing

of the rest of the Union. Why not continue to depend upon them ; why not specially patronize some such excellent periodical as Downing's Horticulturist, or Hovey's Magazine ? Because the self-willed subjects of the kingdom of Flora, persist in acknowledging geographical differences and sectional distinctions. They require an organ strictly local, the exponent of their wants, that depend upon latitude and longitude, and the peculiarities of climate and season. "The Horticulturist," is an excellent organ for the North River Country—good for the Gennessee Country, not far out of the way perhaps for Upper Canada, even; but the season at Albany, where it is published, is earlier and later by just one lunar month, than the season at Philadelphia, its indigenous Flora differs from our own: and the same exotics either cannot be raised in the two places, or requires a totally different climate treatment. And there is no Journal of its kind published South of the Horticulturist ! Our Florist will be literally, alone between Albany and New Orleans. Surely if the gentlemen Florists of Northern cities can sustain their several Journals, those of Philadelphia can maintain one !

But we don't count merely upon the favor of the rich—we look and hope for our chief patrons among those of like degree with ourselves. Philadelphia has been called by two good names ! The City of Mechanics, and the City of Flower Gardens. The first manufacturing city of the Union, her mechanics are mainly of the class who are moral and intelligent, and who cherish the refinements as part of the comforts of their homes. The City of Deep Lots—it is by reason of the many gardens attached to her long rows of even houses, that our town plot spreads over an area of ground more than one fourth greater than the Metropolitan City of New York. And who among us does not know how many floral gems of beauty bloom in Philadelphia South-side windows—how many choice fruits are ripened in humble Philadelphia back yards ?

The Yards and Gardens, *have no Organ.* It does *them* no earthly good to have at second-hand, the statistics of English noblemen's conservatories, or how Pines can be raised at less than a Guinea a pound ! We shall try to write for the yards and windows. We invite communications of all kinds from the yards and windows. We shall never need to apologise for the short comings of the rich, so long as we can insure a sufficient number of Yard and Window Patrons.

No, indeed, our apology is offered for nothing of the kind. Our apology is for the present number of the Florist, and the circumstances of haste under which it is produced. The late unusually inclement season has given rise to a general call from the Yards and Windows, for a Calendar of Operations for Amateurs at the commencement of the Spring Season. A particular desire was

manifested too to have freely published the April Report of the Penn. Horticultural Society, kindly placed at our disposal by Thomas P. James, Esq., for whose kindness we have to acknowledge our especial obligations.

An issue like our own has been long talked of: There seemed to be a doubt among its best friends whether it would have any better than a *conversational* existence. It was time to hazard something — And so, Gentlemen, Ladies, Editors, Amateurs, Gardeners, and Members of the Pennsylvania Horticultural Society and Gardeners Union, the Philadelphia Florist makes you its bow, promises to do its best hereafter, and asks you kindly to acknowledge its first appearance.

We have a few words to say in answer to the members of the gardening craft. They have asked many questions with regard to our motives and plan of proceeding—who was to conduct this Journal—who would support it? Talked of other failures of swindling projects practised upon them. These questions we had every reason to suppose would be proposed; we shall best reply to them by acts. We thank them for their careful solicitude for our personal safety and their own. To those who proposed no difficult and chilling enquiries, but went with us cordially, we tender our thanks, and respect those close and calculating men no less, who form the ribwork of civil society, by binding in certain form the swaying intellects of the sanguine and enthusiastic. "Without a little enthusiasm," said a learned divine in our hearing, "the world would stand still;" yet we admire those most whose enthusiasm in such an undertaking as the present is manifested in something beyond mere words; or do not the very enthusiasts talk away their enthusiasm? We hope not. We shall see. Our reasons for commencing a new speculation amongst so many older and abler speculators are simply these. We do speculate upon procuring circulation for another Journal devoted to the sublime and beautiful, even in Philadelphia, a mercantile city, where money and stocks rule the roast—where gardening, gardeners and gardens are but called into requisition to trifle away a leisure hour, and Horticulture and Botany terms not well understood—where it is supposed the Philadelphia Florist and Horticultural Journal will prove an ephemera or a nonentity, and its ardent originators and kind promoters but idle dreamers. We speculate however on far different results—upon the discrimination of a scientific public; upon the intellectuality of Americans as representatives of true republican institutions; upon the good morals of the gardeners of this vicinity; on the refinement and skill of our citizens; on their love of the beautiful in nature, for nature swells with beauty; and on the passion for novelty, not least in the list of items which we have just run over.

Philadelphia is not a mere mercantile city, where the race for wealth is run by citizen and foreigner, which overturns or tramples upon the divine and beautiful, moral and intellectual principles of nature; it is a city where these principles are cherished and appreciated—where the artizan of enterprise appeals not in vain to the millionaire, nor the gardener to the territorial proprietor, nor the clerk to the merchant for aid and succor. And in these conclusions we state facts as we find them in the Quaker City, as other immigrant foreigners have found them.

Our Monthly Tour of Inspection.

Gardeners are generally much addicted to perambulation; they learn much in this way, more than being closely confined in their own conservatory or truck patch or parterre. We wander much about. We derive pleasure from the knowledge we gain in the small plant houses of enterprising amateurs more than in the immense collections of old cultivators.

General Patterson's houses contain at present some valuable specimens of plants such as *Illicium floridanum*, *Polygala oppositifolia*, *Tropœolum canariense*, *Franciscea latifolia*. Fine specimens of orange trees bending with ripe and perfect fruit, and a variety of large and showy specimens of more generally distributed plants—Gardener, Isaac Collins, Locust and Thirteenth streets.

James Dundas, Esq.—The plant houses of this distinguished amateur of horticulture, always open to the lovers of the science, are worthy a visit at this season. The eye fatigued with snow, and frost, and rain, and mud, rests here on luxuriant vegetation in a state approaching nature. The orchids hang in pendant spikes from decayed vegetable matter, in the shape of rustic wood work, nine feet in length, a spike of oncidium altissimum—or (tallest oncidium) wanders amongst the frond of the *Latania* or Palm. The curious pitcher plant with its well adapted operculum hangs from its block in humid luxuriance, *N. Rafflesianum* is the new species and may be seen here, and the little pitcher plants all around indicate the old gardener's success in impregnation and cultivation. Mr. Bisset is your friend if you are a friend to horticulture. He has also Fuchsia Chalmerii, Snowdrop, Gay Lad, Chateaubriand and many others in full bloom. Also *Maxillaria Grahamii*, *Oncidum Cebolletii*, *O. flexuosum*, *O. Carthaginiensis* and others in fine order. But our list would swell, and the Magnolia out doors tells that all are not in the houses which are worth notice. We shall call again before November. We have not had time to stop at other places in the vicinity but shall do so at our first opportunity.

ROYAL BOTANICAL GARDEN, GLASNEVIN, DUBLIN.

By the Curator's Report of this Garden, we learn that steps have been taken to cultivate the Victoria Regia there. A brick and cement tank, fifteen feet square, has been built at the end of one of the houses. The sugar beet, so interesting as an economical crop to the Irish proprietor, has been experimented upon in twelve different ways; prepared manures were applied, as well as turf mould—the former experiments were intended as a test for the analysis of the roots, the result will be reported. Flowers and plants have been furnished from the Garden to the Dublin School of Design. An economical museum is wanted, as there is at Kew.

☞ Now Spring is upon you, gardeners, farmers, truckers, and all others interested in the soil and weather. As a friend, we would advise you to be active, energetic, decided, and yet careful; those not familiar with our climate must just gain experience as others have done—by paying for it. Take heed, as Poor Richard says, that you do not pay dearly for it. Our spring is short, very short; to-day, our plants languish for sun and light and air—to-morrow, they wilt and become parched by rapid and unusual evaporation. Watch plants in pots, accustom them gradually to these sudden transitions of heat, light, drought; and cold, shade and over moisture—the delicate leaves cooked by the artificial heat, must be gradually restored to vigor and health. Vegetables must be got in at once; all small seeds, flowers and others, must be sown as soon as possible. By our next appearance we shall, I hope, have to congratulate the craft, on their release from a spring, late and ungenial, to a pleasant summer—*sursum corda.*

We have received many encouraging letters from friends, exiciting us to carry out our project, which we are determined to do at all hazards, without however involving any risk. We have relinquished the spade for the pen, but are well disposed to resume the former at any time; indeed we shall always fraternize with our old friend. "I never murmur at the lot which dooms me as the rich man's slave." Our especial thanks are due to those contributors who went to work for this number, and although a few were late, they will be early next time.

Communications received from W. Sanders, Baltimore, John Murray, Meadville, Pa.; F. Norton, New York; F. W. Connor, Glasnevin, Dublin; A. Campbell, do; Thos. Kirkpatrick, Esq. M. D., Dublin. We shall give a few extracts in our next from these communications.

☞ A testimonial is preparing for C. McIntosh, author of the Practical Gardener and Book of the Garden, gardener to the Duke of Buccleuch, Dalkeith Palace, Edinburgh, Scotland.

☞ We have to return thanks to Messrs. Scattergood & Howell for their attention in getting up the cut for our cover so hurriedly, and yet so tastefully. We knew Philadelphia was hard to beat. Our friends can judge how much we erred in our calculations in this department. Mr. Hoffy's lithograph is also creditable, and with the finish put on by Messrs. Duval, and the coloring from the School of Design, we congratulate our readers on the production of a really original affair.

☞ The Pennsylvania Horticultural Society has a few words to say as to its claim to public support, and the value of such a society cannot be overrated in a community like ours; with a spacious Botanic Garden, which Philadelphia must one day own, we should be *tout au fait* in Horticulture.

☞ All communications for publication with names of writers appended, to be addressed to the Editor, at 48 S. Third St., above Girard Bank, up stairs—all plants for examination, or specimens for determination, must be sent free of expense—all plants with leaves flower, or fruit, will be named if possible, or any enquiry as to gardening, botanical or agricultural matters replied to. Several communications too late for insertion, will appear next month.

☞ Of the Association of free and Independent Gardeners, we could learn nothing officially, we waited anxiously, and still anxiously watch for some indication of preparations for their Spring exhibition, this is much wanted, and would, no doubt, be a successful project.

☞ We advise all our gardening friends to look out! They may see by a resolution passed unanimously at the last stated meeting of the Pennsylvania Horticultural Society, that a Committee of Inspection is to visit all garden establishments within the influence of the Society; that is to say, if we comprehend aright, all members' establishments. Many amateurs love seclusion, science loves seclusion, plants prefer, one would suppose, "to blush unseen, and waste their sweetness on the desert air," however many amateurs wish to be recognized as such; and we trust the committee will meet with no unnecessary obstacle, if their tour of inspection is to be productive of information or benefit, either to Horticulture or Gardening.

☞ We claim to be excused for the report of the Penn. Hort. Society. We made it up from our memory more than from the official report which has already appeared in the "Evening Bulletin."

☞ For description of plate, see page 32.

☞ The Botanical description, we must omit till our next.

Reported for the Philadelphia Florist.

Pennsylvania Horticultural Society.

The stated meeting of this Society was held at their Hall, Lower Saloon, Chinese Museum, on Tuesday evening, April 20th, 1852—W. D. Brinckle, M. D., V. P., in the Chair.

The display of flowers, plants, and vegetables was considerable, taking into account the extreme severity of the past season, which is not the least repentant of its severity; the rain having continued without any intermission during the day. The turn out of zealous amateurs proved the taste for horticulture evinced in our city and county.

Amongst the objects observed on the table, were a fine collection of plants from the nursery of R. Buist, Rosedale, foreman, Wm. McIntosh, consisting of *Arbutus nepalensis*—(Nepal, strawberry tree,) a new plant with beautiful light colored flowers, edged with rosy pink —much like the old *Arbutus Andrachne*, but with lanceolate leaves. A fine specimen plant of the new *Campanula nobilis* var. *alba*—(stately white Bell flower) first time before the society. Also Epacris hyacinthiflora, for the first time exhibited here. An Auricula, whose appearance was quite refreshing to the florists of the "old school," also attracted notice—it is named "*Morning Star*," a special premium of four dollars was recommended. Some fine and distinct varieties of cinerarias, with a few neat *Ericas*, or heaths from the Cape of Good Hope—*Erica brunioides*, *E. pubescens major*, and *E. pubescens minor* made up this select lot. From the garden of C. Cope, Esq.; gardener, Thomas Meehan, we observed *Passiflora racemosa* (racemed Passion vine), *Manettia bicolor* (two colored Manettia), a large trained specimen of the scarlet Defiance Verbena. Justicia Carnea (a large and showy specimen though an old and well distributed plant, desirable for borders in summer, to be taken up and housed in fall), seedling Cinerarias of merit, and specimens of the double white, red, and fimbriated Primula sinensis (Chinese primrose), *Cuphea platycentra* (broad crowned Cuphea). From the same contributor were fine specimens of the showy Orchids (Nat. Ord. Orchidace of Lindl.), *Gongora maculata*, *G. picta*, *Oncidium lanceanum*, *O. luridum*, *Maxillaria striata* and other plants. The most rare and interesting plant exhibited in this collection was *Henfreya scandens*, a beautiful plant of the N. Ord: Schrophulariaceæ or Fig wort tribe, with dark green foliage and pure white trusses of ringent or gaping tubular flowers, in habit so strikingly peculiar as to constitute a most desirable plant for the *recherché* amateur; but we must soon close our admiratory observations or we shall get beyond all reasonable limits. A seedling Rhododendron, a hybrid with the Chinese Azalea, (Azalea sinensis) was produced by John Sherwood, green

house, Sch. Seventh and Market streets, which attracted the notice of the curious in Hybridisation.

A well grown specimen of the desirable *Pimelea spectabilis* was an object of special attention from R. Buist's houses.

A fine collection of PANSIES, Heartsease, Johnny jumps—(*et hoc genus omne* of native terms) were shewn by James Powell, nursery gardener, Francisville, Ridge Road—the first premium was awarded him. A good selection was also furnished by R. Buist's foreman—to which the second prize was adjudged.

A group of ROSES in pots, of everblooming varieties was furnished from the house of C. Sheetz, to which the first prize was awarded. For a collection from Thos. Meghran a second premium.

BOUQUETS, for design of cut flowers—for the best Thos. Meehan. Suitable for hand, premium to A. Burnett, gardener to Joseph Ripka. Basket of cut flowers best to Thomas Meehan.

IN FRUITS there was no competition reported for the regular premium set forth in the schedule: we observed however a basket of well ripened strawberries deposited by Thomas Meehan, also a dish of grapes from vines which had borne a crop last fall; a dish of Baldwin apples from C. Horton, Esq. Maine; to each of these articles a premium of $1 was recommended.

Another bloom of the Victoria was exhibited by C. Cope, Esq.

VEGETABLES for the best display which consisted of Lettuces in six sorts, Radishes, French Beans, Early frame Peas, Asparagus, Parsley, Cucumbers, &c., prize to Thomas Meghran, Gardener to R. Cornelius, Esq. $2 was awarded for a dish of Peas, and a basket of Beans; also $1 for a plate of Mushrooms.

The Meeting having been organized, the minutes of last meeting read, and reports of the different Committees for the evening reported and adopted. The Committee on the Portrait of the President was called to report progress, which they did by stating that one of their members being unable to attend, they requested indulgence till a future meeting, but stated that the Painting had been executed and suspended in the Hall this evening—(which was regarded with no small satisfaction by the many admirers of its original; it seemed to be suspended unfavorably as regards light; we are not critics in these matters however.

A resolution was brought up again which had been discussed at a previous meeting, respecting a Committee of Inspection of the Gardens around Philadelphia. The resolution being read is as follows:

Resolved, That a Committee of five be appointed to inspect all the Gardens, private and commercial in the neighborhood of this city.—That the proprietors of such gardens be requested to furnish said Committee with a true and correct statement of their respective Establish-

ments, enumerating extent of ground, quantity of glass, &c. &c., and any other desirable information.

Resolved, That said Committee be authorized to employ an Amanuensis if required, and take such other measures as to present to this Society on or before the Monthly Meeting in November next, a full report of all the Establishments around the City. Passed *nem. con.*

CALENDAR OF OPERATIONS,

Written by Practical Gardeners, for the Philadelphia Florist,

APRIL AND MAY.

Oh, such a Spring after so severe a Winter! and preceded by such a hot and parched and dry Summer! Yet this is only as it should be. The renovating frosts destroy the germs of disease and impurity, cleanse and invigorate Nature after summer's drowsy heat.

The snow adds in its mysterious way to the fertility of the soil, probably as the special absorbent and conductor of ammonia, preserves the herbage from cutting winds, and wraps the face of Nature in stillness while she sleeps. And now the heavy rains are falling to replenish the springs, and streams and rivers, and irrigate the plains so that, against the solstice next approaching, "by the scent of water all green things shall bud and blossom throughout the land." With this effusion our contributor begins a little abruptly the

CALENDAR.

Shrubs, ornamental and *ugly*, must be trimmed and relieved of all dead and unsightly branches and shoots. The extreme frost of the last rude season, has left none too much to cut.

Roses, must now be finished; all pruning must be got through with, and the mind of the Gardener relieved of it for *good*. Vegetable seeds are sown to some extent, such as Peas, Spinach, Parsnip, Carrot, &c. Onions have been planted—go on sowing Peas at regular intervals of two weeks; a few rows at a time, to keep up a succession of this most desirable *leguma*. Beans also, as soon as is safe or advisable, which must be left to the judgment of the weather-wise gardener; sow however, in regular succession when once commenced; the honest seedsman will tell you the best sorts according to peculiar circumstances; Cauliflowers or *Chou-fleurs*, are now being cut, and forming heads in frames; salading is in good order, where carefully tended during the past winter.

Cabbages, are beginning to stir out of close quarters, as well as many other prisoners who do not fraternise with Master Frost. But, why do I write? all Cabbage gardeners know these things. (Our correspondent writes for Amateurs,) Well, what they know does them as little harm as what they don't know—Strawberry plantations are no doubt completed; we shall watch this nice fruit, and learn all about it, and then try to teach what has been learnt—there are many strange systems in our day!

Potatoes, have got a cold wet bed to start in, this spring, we hope they may not rot, especially those which cost four dollars per bushel.

Five kinds have been lately introduced, Kemps, Prince Regents, Forty-fold, Early frame, and American natives.

BEETS, if not already sown, should be sown as soon as the state of the soil will permit, at present it is charged with water and will be unfit for operating upon for some time.

RHUBARB, is now fit for use at least those plants kept covered under barrels and otherwise, will afford some stalks for early use.

TOMATO.—This prince of the Vegetable Market is in the back ground from the nature of the season, its time is coming; small plants are hardening ready to plant out when Spring shall say "I have come!" Have your plants strong and hardy, and plant a few out as soon as possible—keeping a number to follow in succession; for extensive crops, they may be sown in the open border after May, should the soil become sufficiently friable. *Egg plants* demand similar treatment.

CELERY—Should be up in frames and coming forward to plant out, they should be pricked out, as we term it, as the latter part of July is quite time enough to plant out for a general crop. The summer drought is too great for this peculiar and succulent vegetable. Good Celery is one of the most valuable crops the Gardener can have; good stalks sell for eight cents each when scarce. Many plans are had recourse to for keeping the plants shady and moist. We shall give some of them in our next.

SALSAFY, or Vegetable Oyster, should be sown as soon as possible in deep free-soil as it strikes its roots deep—take pains in thinning early. All seeds, almost, should be sown on the approach of dry weather.

PLANT HOUSES—GREEN HOUSES—*Azaleas.*—Repot all those *that require it*, which should, in fact, be done at once with all plants in pots, those which have been forced will require hardening, and attention, so as to set their buds against next season's bloom.—RHODODENDRON, shift into suitable soil; these are noble and majestic looking denizens of the Conservatory, and are worth all the labor of removing their large pots or tubs. The Himalayas, thanks to Major Madden, of Cork, have furnished their quota of new and fine varieties —sent to the Irish Botanic Gardens, and thence received in this Country by some of our Nurserymen. They luxuriate, Major Madden has informed us at an immense elevation, and gives to the landscape a peculiar feature. ERICAS or Heaths, shift also, they belong to the same Nat. order as the Rhod: and require a very similar treatment; all have small fibrous roots and are impatient of any excess of cold, heat, wet or drought, they must therefore be zealously guarded from any extremes. The great difficulty is to keep cool in summer and not allow them to mildew, which they are likely to do when the young wood is luxuriant, and they are too much crowded together in a wet atmosphere. This pest mildew, we shall talk about in season.

VINERY.—In this department there is nothing particular—some have three successions—in the first—thin fruit, and continue to stop superfluous shoots—second, take care to stop all shoots not necessary, and regulate the temperature. In the third; be careful that the shoots *break* regularly, as that is the great point in commencing.

☞ A committee met to discuss the question of the demolition or preservation of the Crystal Palace, Hyde Park, London—result not yet known.

PENNSYLVANIA HORTICULTURAL SOCIETY.

ITS CLAIMS ON AMATEURS AND GARDENERS.

The objects of this Society, as defined in the preamble to the act of incorporation, are to promote and encourage Horticulture by improving the growth of vegetables, plants, trees, fruits and flowers, and of introducing into our country new varieties and species.

The advantages which have resulted to the community from the thus far partial accomplishment of the objects of the Society, may be seen in a strong light, by reference to the extraordinary improvement and extension of vegetables; pomological, landscape and floral gardening; to the very abundant supply of our markets, their tasteful arrangement and superior quality as contrasted with others; and with what they were prior to the formation of this Society; to the improved intelligence, industry and success of our nurserymen and commercial gardeners; and their ability to transport at a profit very extensive supplies of trees, fruits, plants, floral designs, bouquets and vegetables to distant and less favored cities, towns and neighborhoods; to the numerous new and superior varieties of fruits and flowering plants which have been within a few years introduced from abroad, and the many which have originated in our own vicinity; to the extensive and magnificent annual and monthly exhibitions; the large and respectable attendance on them, and the social interchange of intellectual and practical ideas; to the free use made of the Society's library, at present the best and most extensive of the kind in our country; and to the general increase and improvement of architectural and garden embellishments, and the extensive use of floral designs, bouquets and rare plants to ornament our conservatories, halls, drawing-rooms and tables.

The advantages in the future are of a more important character than these—the permanent advantages likely to result to the community from a cultivated taste for Horticulture and its collateral sciences will manifest themselves in improved moral and intellectual culture; in industrial, temperate and time-saving habits; in healthful, rational, and delightful amusements; in improving, softening and rendering more pure the dispositions, tempers and affections, and in contributing largely to make our residences the home of taste, beauty, fragrance, contentment and social enjoyment.

The only claim at present enforced in behalf of the Society is, that all who approve of and would perpetuate and extend the objects and advantages herein represented and alluded to, should, without delay, be numbered among its contributing members—which may be done by application one month prior to admission, at an expense of three dollars annually, or twenty-five dollars for life. A further inducement to admit and discharge this claim, by an early application for admission to membership is, that in addition to the ordinary privileges granted, the members are allowed, both at the hall and at home, the free use of a library (embracing the best works on almost every scientific and useful subject,) and that each member is allowed free tickets of admission for two ladies and himself, to the annual and all monthly exhibitions and business meetings of the Society, which, independently of all other considerations, should be deemed more than equivalent to the small contribution required. We hope ere long its claims shall be manifest.

[PLATE 1.]

DICENTRA (DIELYTRA) SPECTABILIS.

JAPAN DICENTRA.

Natural Ord—Fumariaceæ Juss ;

Class Diadelphia Linn : Ord. Hexandria.

SYNONYMES.—Dielytra spectabilis Bork. Hook from *Dis*, two *elytron* a spur. Dielytra De Cand, Prod—Vol. 1, P. 126. Fumaria spectabilis—Linn: Cysticapnos spectabilis—Corydalis spectabilis—Pers.

POP. DESCRIPTION.

Herbaceous Perennial, from China and Japan, flowered first time in the vicinity of Philadelphia, during the past Winter, imported by a Nurseryman of the city, from London, where it flowered in the winter of 1848 at Messrs. Knight and Perry's, King's Road, Chelsea; introduced previously to the Garden of the London Horticultural Society's Garden at Chiswick, by Mr. Fortune, who observed it in the Fairy Gardens of the Mandarins, about Chusan, where it is much cared for and called by them, the Red and White Moutan Flower, in their vernacular Hong-pak-moutan-wha—closely allied to the pæonia—the plant, now past bloom, having been forced, may be seen at the Conservatory of Jas. Dundas, Esq.

CULTIVATION.—For forcing requires a 4 or 6 inch pot with rich soil —loam and leaf mould, with a little sand—moderate heat in December and January—will flower in February and March—in open ground in May. Not yet proved to be hardy in Britain, but must prove so in the vicinity of Philadelphia ; as is, its companion *Weigelia rosea*, introduced from the same locality by the same collector, and which, with *Forsythia viridissima*, has proved a desirable object, for the Conservatory in early Spring, and even throughout the Winter when judiciously managed. We shall have its capability of enduring frosts tested at the first opportunity. It proves a most desirable plant for rooms. and may be easily taken care of by allowing the roots to dry off, after flowering as we do some of the Pœonias, so well known. The roots will continue dormant until at a proper season they may be again excited by heat, fresh soil and water—a Russian Botanist first introduced it to the notice of the Great Linnæus, probably by forwarding a dried specimen.

Loudon's Tomb at Kensal Green.—P. MacKenzie, in the London G. Chronicle, complains that Loudon's Tomb is concealed in Kensal Green Cemetery, or at least not prominent. Why should we complain that the mortal remains of the illustrious are hidden—'tis well that they are. If they have been illustrious as human benefactors, their memory lives in the recollection of the good and wise. What good man cares to have his tomb gazed upon by idle cockneys, Lunchers, as they term them at Kew—seekers after the showy and glaring things of this vain world. However, every one to his taste.

Campanula, nobilis, alba.

Sinclairs lith

Nepenthes Rafflesiana. *Grammanthes gentianoides*

THE

PHILADELPHIA FLORIST

AND

HORTICULTURAL JOURNAL,

A MAGAZINE OF

Horticulture, Botany, Agriculture, and the Kindred Sciences.

Conducted by a Committee of Practical Gardeners. R. ROBINSON SCOTT, Editor, No. 48 S. Third Street, above the Girard Bank, up stairs.

VOL. I.] PHILADELPHIA, JUNE, 1852. [No. 2.

ACCLIMATISATION OF PLANTS.

BY THE EDITOR.

Having emerged from a winter unusually rigorous, we look around for the favorites to which we bade adieu last fall, in the hope of meeting them again, re-invigorated by spring's genial showers and sunny beams. Alas! how many have been arrested in the path by scourging frosts and decomposing rains? And what are those which have so perished--are they not the pampered offspring of tropical fields, the nurslings of the conservatory, from whose hospitable roof they were excluded for want of space, and left to herd with the more hardy denizens of our colder climate? They are. They are the natives of soils warmed by the same sun, but in different latitude and longitude—the indigenous plants of countries possessing a different thermometrical range from our own; perhaps luxuriating at a greater or less elevation, fed by warmer or colder rains in the summer, and cheered by stronger or weaker beams from the sun in winter; sheltered, perchance, in winter by deeper and more constant snow, and dried in summer by periodical winds, peculiar in their character and effect. How can we marvel that such things are—"Can such things be, and overcome us like a summer's cloud?"—they can be, and are so fixed, and we must bend to this disposition of things without a murmur. Let it not be supposed that because some successful and enterprising gardener has raised the stately Cedar of Lebanon away from its cherished hills and loved streams, and transported from the region where the Great Teacher trod, the *Paliurus aculeatus*, emblem of his sufferings; or brought from Asia Minor the *Chamærops humilis*, which is known only as an indigenous plant along the shores of the Mediterranean, and planted it in the rock-work of temperate and humid Ireland; or coaxed the

Calla æthiopica, now Richardia æthiopica or Egyptian Lily, into the ponds in the southern portion of that country, to vary with its tropical aspect the monotony of the surface, clothed with *Nymphæa* and *Nuphar*, and *Typha angustifolia*, and many other pretty aquatic plants, —let not the daring Horticulturist suppose that there is no limit set to human skill and ingenuity, when in close competition with nature; there are decidedly limits set which must endure with time—insurmountable obstacles to the generalization of the vegetation of the world. And looking at this matter in the most familiar light, apart from any question of Divine wisdom or Supreme skill in the arrangement of nature's scheme, must not the propriety of such a law be evident to the most casual observer, when he considers the love of change which characterizes the human mind—the love of variety even in the individuals of his own species. Man loves variety in form and coloring, and taste and smell; looks in new districts for objects unfamiliar to him, because he knows they are to be met with. Were such absent, he would return to his former locality or place of abode disconcerted, disappointed; his desires conform to the natural arrangements of nature—the arrangements of nature square with his moderate desires; he looks in the country for green fields—they are there; in woods for foliage and shade—it is there; in the streams for minute specimens of vegetable and animal life—they are there. He does not look for the whale on the mountain side, or for the Arabian steed bounding through the deep, no more than he would look for Pinus sylvestris in the meadow lands of the south of France, or the *Araucaria imbricata* on the sandy plains of New Jersey; or the Vanilla plant hanging on the bark of our Pennsylvania oak; or the Acacia pubescens growing by the side of the sweet shrub (Calycanthus.) We have hinted what we do not expect to see according to the natural regulations which govern climate. We have now to enumerate what surprising results have ensued from skill and ingenuity directed to the acclimatisation of the plants of one country in another — the desire to vary the landscape, to refresh the eye by throwing in new forms, to break the monotony of the long rows of trees of similar outline and character. The foreigner who visits this country is struck (especially if he comes from Britain) with the aspect of nature in our forest trees; he sees whole lines of beautiful cedars, still left as they have been planted by nature, unsurrounded by any brushwood or bramble; his old friend, the Hawthorn (*Cratægus oxyacantha*) is almost wholly absent as a hedge-row; the Gorse or furze, which in some districts in Britain is the prevailing feature in the fences, is not at all seen in this character. The evergreen privet (Ligustrum vulgare) not at all common, and nothing will after a time be seen but Osage, Osage, Osage! with its dark shining foliage and spiny branches after age has matured it.

We saw a large plant of the Maclura once against a wall, and formed a very different opinion of it to what we now entertain. There it was a foreigner, a nursling, and commanded respect—an inhabitant of the great receptacle which the garden of Kew forms for the natives of all countries and climes. The Paper Mulberry, too, was there, (perhaps the *multicaulis* so well known to speculators) as a beautiful and showy arborescent shrub, with its multiplicity of forms in foliage, it being a common practice to puzzle the *greenhorn* by challenging him to find two leaves identical in their lobes. We had there also the Forsythia viridissima planted against a wall exposed to the south, and it astonished us one morning with its fine yellow bloom and naked branches, being alone, almost without a Chinaman or a label to tell its name. Fortune was but one mile distant, so that its identity as one of his proteges was soon discovered.

We had also as an acclimated inhabitant, *Weigelia rosea*, *Cryptomeria Japonica*, *Acacia Julibrissin*, *Eucalyptus pulverulentus perfoliatus*, and many other New Holland plants, Ericas from the south of Europe, and Rhododendrons and Azaleas from the Himalaya, and Nepal plants without number, and North American grapes, and Ampelopsis hederacea, and other species; and Phytolacca dodecandria, or poke weed; these all flourished there, or, as they term it, were acclimated. How far their idea of acclimatisation goes we cannot say; we do not believe they were acclimated. In fact, we do not much believe in acclimating plants at all; but we shall give more facts next month, and allow our readers to judge for themselves.

NATURAL SCIENCE.

"The man who makes two blades of grass grow where but one grew before," &c.—Cobbet.

Agriculture, The science by which we are supported—the science that teaches man how to use the gifts of God—which affords nutriment and aliment to all created beings, without the aid of which we should be no better than the Nomadic hordes of South America or Africa. The farmer is rather low in spirits, although his carefully stored potatoes realise $1 and $1.25 per bushel, and other provisions in proportion; beef $12 per cwt., vegetables as parsnips, carrots, &c., almost any price. The housekeeper, ignorant or unmindful of natural consequences, exclaims against the farmer or dealer, and he wonders at the want of sympathy displayed towards him—his operations are backward, he is hurried with work to be done; he hates to come to market, yet money must be had. His soil, if clayey, is not yet in perfect working order; his potatoes, if early planted, likely to rot, if not already rotting; his small seeds not yet vegetating on the 6th of May, and his family not diminishing in number; but the cheerful mind does

not fear—he goes to work spiritedly, reduces his lumpy soil to minute and convenient particles, or, as we term it, to a proper *tilth*, sows his seeds with the full assurance of a fair return—for the Fall will return as it always has done, full of fruits from CERES and POMONA.

The reading and improving farmer does not bury his corn as he gets it off the cob; he prepares it by immersion in some medium which hastens its germination and preserves it from attacks of insects. He has read in the various agricultural works what these preparations are, how applied, and where procurable; he adds to his corn hills a portion of active artificial and concentrated manure, endeavors to plant immediately before rain, so that the strong compost by aid of moisture will produce the most beneficial result. And he hopes to be repaid for all his extra trouble and expense by an extra crop, and will have no reason to blame Liebig, or Johnston, or Skinner, or Mapes for so advising him—for Mapes has analyzed his soil at a cost of $5, and discovered that some necessary ingredient was wanting, perhaps chloride of sodium or common salt; he has at his suggestion supplied it. Perhaps there was a deficiency of silica to invigorate the stem, and marl has been added; perhaps phosphates were in small quantity, and guano or bone dust has been laid on in quantity and at a cost, but he hopes to be repaid, and he has faith in scientific agriculture—he will not be disappointed.

To the Editor of the Florist.

STATISTICS OF HORTICULTURE.

BY DUNS SCOTUS.—CONTINUED.

It was about that period that the Horticultural Society changed its time of meeting to moonlight nights, to suit the convenience of its country and suburban members. Amongst the country seats enumerated I should have mentioned Thompson's and Sims', the former now occupied by the venerable J. Longstreth, and the latter is known as Laurel Hill Cemetery. Of the gardeners and nurserymen then celebrated, very few remain to see the now giant progress of the art; there are, we believe, but six of those veteran gardeners, now silvered with age, who then took an active part in Horticultural affairs; their names are worthy of record in your journal—these are Col. Carr, of the Bartram Garden; Mr. Esher, market gardener, Ridge Road, now retired in comfort; Mr. A. D'Arras, Nicetown; Mr. Maupay, Rising Sun; Mr. Bauman, Germantown, and Mr. Graham, of Blockley.—Pratt's country seat (Lemon Hill) was then in its glory, with its marble fountains, grottos and fish ponds, splendid collections of plants, kitchen garden, flower gardens and pleasure grounds, with beautifully kept walks miles in length. Visiters were only admitted by tickets,

which were furnished gratuitously by the spirited proprietor to all *respectable* applicants. The fine specimens of orange and lemon trees were nearly equal to those of the Tuileries. The best private collection of Camellias was then at Clapier's, and consisted of about a dozen miserable specimens; compared with the forests of those plants now cultivated like willows, they would present a striking contrast. The Geraniums of those days embraced about eight sorts, '*yard longs*;' the monthly, daily, and tea roses numbered four kinds—Pink Daily, Hamilton Monthly, Sanguinea and Tea Rose. The cluster monthly sorts, now Noisettes, were Champney, White Cluster, and Landreth's Carmine. The Azalea and Rhododendron had just then made their appearance, and were introduced we believe by Hibbert. Landreth's Nursery had the finest collection of Camellias and Hyacinths, and if we mistake not, the famed Camellia Jacksonii or Landrethii then made its *debut*.

Now sir, having given you these outlines, you and your readers can complete the figure, and compare it with the year of 1852, the epoch of the "Philadelphia Florist and Horticultural Journal." I cannot close without one word about the first Horticultural periodical in the United States, started in Baltimore say twenty-two years ago. It was $5 subscription per year, to be issued monthly, with one colored plate. It ceased with the first number, which had a miserable daub, intended to represent an Orchid in it, and cost me a V per Dickehut its Editor. We opine brighter and longer days for the "Florist."

[TO BE CONTINUED.]

FOREIGN GRAPES.

DESCRIPTIVE LIST.

PREPARED FOR THE PHILADELPHIA FLORIST, BY JAMES POWELL.

No. 5. Charlesworth Tokay.—Young wood green, foliage dark green, broad in proportion to length, deeply lobed, irregularly serrated; footstalks long, tinged with red; bunches compact; berries oval, yellowish white, skin thick; an excellent grape, with Muscat flavor.

No. 6. Chasselas Red.—Young wood green, changing to a blueish hue before ripening; foliage thin in comparison to others; pendulous, with deep lobes, underside red; petiole or leaf stalk short; bunches large, berries round medium size, thinly set on; bunch red when fully ripe, and well colored; flavor very sweet and pleasant.

No. 7. Chasselas Golden.—Young wood green and smooth; foliage dark green with a light purplish tinge on the under side; lobes not deep, bluntly serrated; petiole long, pendulous; bunch large, well-shoulder-

ed; berries medium size, round, of a fine transparent yellow; flavor slightly smoky; a sweet and excellent grape, and a good bearer.

No. 8. Decans Superb.—Young wood light green, changing to a reddish brown on the exposed side; foliage dark green, slightly lobed, often almost entire, broadly serrated, recurved; a robust grower; bunches shape of the Black Hamburg, (No. 1.) berries large, often 3in. in circumference, round; color light amber, of a sweet and pleasant flavor; a grape well worthy of cultivation.

No. 9. De la Palestine.—Young wood reddish; foliage light green, pubescent on the underside; five-lobed, lobes deep, deeply serrated; petioles long, brownish, pubescent; bunches large, often twenty or thirty inches in length with very long shoulders; berries rather small oval, with a rather thick skin, and firm flesh of a dull yellowish color, speckled with brown spots on the exposed side; flavor sweet and pleasant; rather late, shy in setting its fruit.

No. 10. Duretto.—Young wood light green; foliage large, deeply lobed, broadly serrated, very downy on the underside; petiole long, thick, with a red tinge; bunch long loose, shoulders long; berries long oval, medium size—a strong grower.

No. 11. Esperion.—Young wood red; foliage dark green, with five deep lobes, broad and irregularly serrated; petioles long red. The leaves change to an orange hue before falling; bunches medium size, well shouldered; berries varying in form, of a deep purple color inclining to black, not high flavored but pleasant; a very prolific and hardy grape, known by the following synonymes:—*Blue Windsor*, *Turner's Black*, *Cumberland Lodge*.

No. 12. Eschalot.—Young wood reddish green, smooth; foliage dark green, with five deep lobes, deeply serrated; petioles long and smooth, tinged with red.

NOTES ON GRAPE CULTURE.

BY WM. SANDERS, OF BALTIMORE.

The culture of foreign grapes under glass, without the aid of artificial heat, is a subject gradually rising in importance, and one particularly worthy the attention of every person possessing opportunities for its adoption. That the finest grapes can be produced in their greatest perfection in cold structures has been fully demonstrated. Even in greenhouses, with a border prepared outside for the roots, a yearly production of a crop of this delicious fruit may be easily secured, provided arrangements be made for the withdrawal of the vines during the winter season. The following notes on the practical

management of a grapery may serve as a reference to the uninitiated, and show the facility with which fruit is cultivated in the Midland States.

The vines were planted in April 1850, the majority were two year old plants headed down to one eye; a single cane was produced from each, which, although stopped twice during the season reached the top of the rafters, 19 feet in length. In November they were pruned down to lengths of 8 and 10 feet and laid horizontally along the bottom of the front lights; the house was kept open except in severe weather.

About the end of March 1851, the buds commenced to expand and show symptoms of growth; they were allowed to remain in a horizontal position until all the buds were equally started from the top to bottom. On the 19th April they were all tied up to rafters, very regularly *broke* and showing plenty of fruit; had occasional syringings with soft water on mild evenings.

April 29th, commenced tying the young shoots to trellis, all those intended to bear fruit were stopped (that is, the ends pinched out) at the second joint beyond the young bunch; picked off all the fruit bunches from balance of shoots, but were not *stopped* at present.

May 10th. All the laterals that were forced into growth on the shoots stopped 29th April were taken out, except the leading one, which was not disturbed. The whole of the non-bearing shoots were cut back to within four joints of the main stem.

May 14th. Up to this period they have been regularly aired during the day, and closed at night, except on a few mild evenings, when a small portion of air was allowed all night. All the top-sashes were now lowered about 18 inches, and remained down day and night during the rest of the season.

19th. Tied up all that required it, and again stopped the bearing shoots, taking them off at one joint above where they were stopped on 29th April; the non-bearing shoots were divested of all laterals save the leading points. A humid atmosphere maintained by sprinkling the house with water twice a day, and the vines watered with a syringe every evening.

24th. Growing luxuriantly. Black Hamburg, Royal Muscadine, Esperione, and Zinfindal vines in full flower. All in flower before the end of the month.

June 2nd. The leading shoot of the main stem has, so far, been allowed to extend, it was now checked by breaking of the point, at the same time cleared away all side shoots, except a few at point to carry up the sap, stopped leading points of non-bearing shoots left 18th May; berries swelling.

5th. Observed appearance of mildew. A few of the front sashes

have been regularly opened during warm days, and shut in cold nights, or during rustling winds. I now perceived that the mildew was confined to those grapes contiguous to the sashes operated upon, which for convenience were always the same, while those farther removed were perfectly exempt. Being aware that this mildew is caused by arid air acting upon the tender tissue of the fruit, I determined to keep the front lights close in future, and by way of compromise, lowered the top sashes a little more, so that there was an opening of at least 2 feet all along the top of the house. Have previously arrested mildew on grapes by dusting them with sulphur; resolved to defer its application in this case, until further observation proved the increase of the evil. In the meantime kept the atmosphere moist by liberal use of water on the floor.

12*th.* Commenced thinning out the berries, mildew appears to be arrested, the berries that have been attacked swelling as freely to all appearance as the others. Cut out all the laterals left on leading shoot on the 2nd, leaving the top one to run up the rafter, pinched the points of all other shoots on the vines. The bunches now elaborate a large amount of sap therefore, there is less danger of bursting the eyes for next year's crop by close stopping.

19*th.* Finished thinning the bunches, berries swelling finely, those mildewed swelling unequally, but no appearance of spreading. The foliage has not been syringed since the vines were in flower; but plenty of water used on the floor, and the roots soaked twice a week with rain water.

July 1*st.* Weather hot and dry, stopped leading shoots. They have now advanced to the length desired for next year's fruiting, all growth made in extension after this will be removed in the winter pruning. From scarcity of water the house is rather too dry.

7*th.* Weather still parching. The floor slightly sprinkled with water daily, vines still growing luxuriantly; but show symptoms of deficient nourishment at root.

11*th.* Rain, partly filled tanks; watered each plant thoroughly.

19*th.* On account of the recent dry weather, the vines have not extended much in growth. ROYAL MUSCADINE showing symptoms of ripening. *Mildewed berries turning brown and hard.* BLACK HAMBURG, MUSCAT of ALEXANDRIA, and ZINFINDAL seem more susceptible of mildew than the others; some of the berries changing color.

28*th.* Pinched the top out of every growing shoot on the plants. Cut bunch of ROYAL MUSCADINE fully ripe. BLACK HAMBURGH coloring.

August 12*th.* ZINFINDAL ripe.
17*th.* WHITE GASCOIGNE.
21*th.* BLACK HAMBURGH.
28*th.* MUSCAT of ALEXANDRIA.

There were various other sorts in the house which ripened well, and all cut before the end of September. The vines were then carefully gone over, and the leading shoot deprived of all growth made since July 1st. All the others were shortened back to where they were cut on the 10th May. The border received no more water, and the wood ripened well; buds for next year's crop swelled up, full and prominent, and equally so all over the plants. Herein lies the great desideratum in pruning. Much might be said on this subject. It is not my intention at present to enter physiologically upon the question. Common sense, however, points to the fact, that the proper time to prune plants, is while they are growing.

What advantage is gained by allowing a grape vine to make a large quantity of shoots in summer, and pruning the whole down to a walking stick in winter? There is certainly some care and experience required in regulating the summer's growth, so as to concentrate as much strength as possible into the buds for next year's crop, without causing them to break into leaf. I have endeavored in the foregoing remarks to show the practical method of securing this desideratum by a series of partial checks during the growth of the plant.

With regard to the appearance of the grapes when fully ripe, the coloring was most perfect. White Frontignans, Royal Muscadine, and Muscats had that beautiful amber hue so characteristic of perfect development and superior flavor. The Hamburghs, Tripoli, &c. were of a glossy black. There is no danger of growing black grapes red, under our bright sun, if properly ventilated. I never moved a sash after closing the front lights on the 5th of June, until the end of August when the front sashes were again thrown open.

We are greatly indebted to Mr. Sanders for this extract from his journal. All scientific gardeners we hope keep such a diary of their operations; if so, we shall be quite at ease with regard to practical matter to lay before the readers of this journal. If any scientific gardener omits to chronicle his difficulties and successes, he should at once correct his oversight, and after having procured a convenient pocket diary, set himself down after dinner or supper, before he smokes, to note the occurrences of the day. We shall reserve a column for future extracts from Mr. Sanders' intelligent and useful diary. A great many terms are used by gardeners in describing their routine of culture, which we shall take care to explain: such as stopping of shoots, breaking of buds, mulching of plants and pots, starting of buds. Mr. S. attends to this very properly himself. We direct particular attention to his observations on mildew; they are practical and judicious.

THE EPACRIS.

A horticultural writer lately demanded of the "Working Gardener" in the "Horticulturist," where were the EPACRIS? We shall shew him in a few weeks, if he visit the Chinese Museum. We have in this vicinity grandiflora, paludosa, miniata, hyacinthiflora, and many others. We copy the following from an English paper:

"THE EPACRIS.—It is many years since we first became acquainted with *Epacris grandiflora*—a good and useful plant, but one that has suffered much ill-treatment from early cultivators, for its powers of endurance are great. Any plant approaching what we would now call a specimen, was sure to be rusty in the foliage and dead at the points of the shoots. What a contrast to the noble bushes of it which of late years have been exhibited, clothed profusely with both foliage and bloom.

Epacris miniata, being comparatively of late introduction, has escaped much of the bad treatment to which grandiflora was subjected. It is deservedly held in high estimation by plant growers, and is to be seen frequently in great perfection in many collections at our great exhibitions.

Epacris pungens, and pulchella, of late years have fallen into disrepute, owing to their not flowering seasonably for the shows; nevertheless they are still worthy of a place in the greenhouse. I have a vivid recollection of the beautiful specimens of these plants, which were at one time exhibited by Mr. Green, at 21 Regent street. They were tall, many-stemmed, with gracefully drooping branchlets, clothed with wreaths of flowers.

Epacris impressa, together with campanulata, alba, rosea, rubra, grandiflora, and other varieties, are very desirable plants for floral display, during the winter months. Indeed, to ladies and gentlemen who have only a green-house, they are indispensable; they are of easy culture, simply requiring during winter all the light that can be given them by day, and protection from frost at night. The soil best adapted for their growth is the same as that which is proper for Heaths. As the flowers are always produced on the young wood, it is necessary that shortly after blooming the shoots can be cut back, and properly thinned and regulated; and the plants should be repotted, giving them a moderate shift. They should be kept in the house until they begin to grow, when they may be put out of doors in a sheltered situation, or into cold frames, if these are to spare. At first, they merely require to be protected from heavy rains, and from frost at night. As the weather becomes warmer, and the plants commence growing freely, they should be fully exposed to the sun's rays, taking care that the pots are shaded, to prevent too rapid evaporation and

consequent injury to the young roots. They may be watered with much advantage at this stage of their growth with weak manure water. It is very essential that the water be well aired for a day or two before using it, as thousands of plants in pots are yearly destroyed by employing water at a low temperature from wells, tanks, and ponds, from which the sun's rays are excluded. Their rapid growth and vigorous health will amply repay the little attention they require; and although Epacris impressa and its varieties may not be elevated into distinction by their display at our great exhibitions, yet they will be not the less appreciated by all admirers of pretty flowers. TASSEL."

THE CHRYSANTHEMUM:
ITS HABITS AND CULTIVATION.

BY F. NORTON, NEW YORK.

The Chrysanthemum forms the principal attraction of the conservatory in the Fall, when the profusion of flowers produced throughout the Spring and Summer seem exhausted, and the walks are strewed with the dead and dying. Then the Chrysanthemum comes to cheer us on, and gives hope of the early Spring flowers closely following in the wake of Winter. November and December then have their Chrysanthemum or Golden flower, white, yellow, lilac, marone, crimson, laced pink, dusky purple, and dingy brown. Their Tom Thumbs, or Pompons and Minervas or Giants, the old *sinensis* and its crowd of varieties. The Daisy Chrysanthemum, what is it? A Chrysanthemum like a daisy in form and size, in color and form almost as various as the Dahlia itself. Having had last winter about forty varieties in flower, I felt proud in the centre of this great city to have to exhibit to the visitors a profusion of bloom—and their admiration of them was boundless. I wish now to tell your readers that there is no difficulty in cultivating the Chrysanthemum; most of them about Philadelphia know this already, but you must tell them something at times which they already know, for the benefit of your less experienced supporters. An obstinacy, however, attends the Chrysanthemum, with regard to its season and style of blooming; it is a good time-keeper, does not want to herd with ever-blooming Rose, or Fuchsias, or Azaleas—it wants all the conservatory to itself, as it cannot compete with its more showy and sweet-scented brethren of the spring and summer. The reason it is an autumnal flowering plant is, that requiring the great heat of summer to perfect and develop its growth, it cannot by forcing be brought into luxuriant bloom at any other than its own season; or if it can, the advantage gained is not worth the trouble and expense of changing its season. [Our correspondent, I fear, is ignorant of the experiments in this department, communicated to the Penna. Hort.

Soc. by Thos. Meehan, at Bartram's Garden, in November last.—Ed.] Heat with shade would increase the evil of which we complain in the long stems. All that can be done therefore is when they show their bloom to hasten the opening or expanding of the buds by increase of temperature.

The straggling habit of the Chrysanthemum can be counteracted only by the method pursued in the propagation of the new plants, and during the first year of their growth; indeed, they should be renewed each year, rejecting two year old plants. The cuttings should be taken from the end of the shoots or branches, and at as late a part of the season as possible, in order to ensure a more dwarf habit and earlier bloom; cuttings may be taken from the tops of the shoots so long as there is no bloom to be seen; by this means, the plant being already partially developed, its flower buds will be matured sooner than by taking an offset from the root, having no tendency when cut to form flower buds. Make the cuttings 3 or 4 inches long, cutting or stripping the leaves off half its length; cut it smoothly across the extremity so as to leave no ragged edges, and to present the least possible amount of surface to heal, *callous*, or granulate, which must take place before any roots can be made—a rule which should be observed in general propagation; insert the cuttings thus prepared up to the leaves which remain, or about half their length in rich, open or porous soil, composed of leaf mould, peat or Jersey soil and loam, in proportions according to the judgment of the operator, which after all is the best regulator in these matters, for we cannot measure a small portion of soil accurately, and long dry tables of component parts belong rather to the laboratory than the potting shed of the amateur, for whom this simple article is written, as I am not gardener enough to pretend to teach the "working gardeners," and cultivators of Victoria Regia, who know all about Chiswick and Kew, and every thing else —the Crystal Palace and Sir Joseph Paxton not excepted.

But I have not done with our fall friends, though this is spring, and a six-months must elapse before the Chrysanthema will look around for admirers. Put the cuttings in seed pans (or cutting boxes, according to old Bisset's plan, with a cover of glass;) never let them wilt; do not shade them too much, but only when absolutely necessary; slight bottom heat hurries them up, for this is a great country to do things right off. Wipe the cover of the box or pan regularly, to prevent damping from moisture. Novices in propagation will be more successful in early spring, the wood is then soft; they should however continue putting a few in all through the season—the later the cuttings are taken however, the more dwarf and pretty the plant will be by observing the proper system of after culture. After being satisfied that they have rooted, they should be potted into convenient sized

pots, say 2 or 3 inch pots, shifting them, if successful, into 6 in. pots, in which they may flower. When preparing soil for removing and repotting, increase the quantity of strong loam, as they require good heavy soil to bloom them luxuriantly. To make large plants for out-door flowering, plant those which have been already one year in the pot, as they make a more robust plant for out-door culture. Good healthy plants arranged in proper colors, exhibit a gay appearance along a fence or wall in the months of September and October; but every one knows the showy Chrysanthemum from *chrysos* golden and *anthos* gr. flower. They may be pegged down in masses for bedding, or tied to stakes, or trained to the trellis; they are a most accommodating family of plants.

☞ See for names of choice varieties, the following list furnished by another correspondent:

DWARF SORTS.

Dejanier,	Adsrubal,	Solfatare,
Triumph de Bordeaux,	Angustinus,	Surprise,
Nelly,	Argentine,	Fandango,
Rose d'Amour,	Autumna,	Valeda,
Lartay,	Asmodeé,	Mad. Laffarge,
Dalgide,	Sacramento,	Roi des Lilliputiens,
Iris.		

Anais,	Guillaume Tell,	Marie Vouzel,
Bergeronnett,	Henriette Chauveri,	Mad. Andry,
Blondonett,	La Gitana,	Modelle,
Ed. Miellez,	Lelia,	Ninon,
	Pindare.	

Our correspondent has not stated which of these are large sorts.

LARGE VARIETIES.

Barronne de Solomon,	Formosa,	Rosa Mystica,
Plutus,	Duke,	Rossinii,
Pilot,	Warden,	Giroflee.

New Phloxes.—Roi Leopold, Abdul Mejid Khan, Paul et Virginie, Mad. Viard.

New Gadiolus.—Fanny Rouget, Mad. Couder, Mons. Blouet, Mons. Georgeon.

MISCELLANEOUS PLANTS, LATELY INTRODUCED TO PHILADELPHIA.

Medinilla magnifica,	Franciscea eximia,	Abutilon Van Houtii,
Lapageria rosea,	Allamanda Aubletii,	Anguria Warsewickzii,
Cantua dependens,	" nerifolia,	Steriphoma paradoxa;
Drimys Winterii,	Ipomæa limbiata,	Augusta (Stifftia) chrysantha
Passiflora diversifolia,	Gesneri Houteii,	
Hoya suaveoleus,	" macrantha purpurea,	Tabermontana longiflora,
" imperialis,	Eriostemon nerifolium	Viburnum suspensum,
Cyrtoceras Paxtonii,	Columnea aurantiaca,	Stanwick Nectarine.
Posoqueria formosa,		

GLOXINIAS.

Alex. Werner,	Grand Duchesse Héléne,	Wm. Griffith,
Baronne de Vriere,	Josephine de Beauharnais,	Petoriana,
Comte Borghii,	Louise Aimé,	Virginalus,
Comtesse Potockii,	Mad. Anglac Adanson,	Fuchsia Expansion (purest white grown,)
Deuil de St. Héléne,	" Belleforia,	
Duc d' Isly,	Marie Van Houtte,	Sidonii,
Hoogeveen,	Napoleon,	Psyche.
Genbrugge,	Professeur Parlatore,	

AGRICULTURAL CHEMISTRY.

When the "Plough, Loom and Anvil" flourished under the editorship of the late respected J. S. Skinner, many valuable communications found their way into its pages. We remember reading one which attempted to show that a knowledge of chemistry was useless to the farmer, or at least not necessary. We think different and add in this place a few observations written at the time, which were denied publicity.

We extract the following from an article of one of his correspondents, and his own opinion follows.

"A great deal has been said and written of late, on the importance of a knowledge of agricultural chemistry to the farmer, to enable him to cultivate his lands in the most profitable manner to himself and fellow-men.

"Now, my dear sir, will you be so good as to tell me what practical good chemistry is to a farmer (as a farmer), and what discovery has chemistry ever made that would enable him to raise one blade of grass more? I am particularly anxious that you will publish the answer to these questions in the "Plough, the Loom, and the Anvil," first, because you would take a more impartial view of the subject, than any one I know—and secondly, because there is considerable diversity of opinion and much interest manifested by the farmers in this section of country. I trust you will not consider it presumptuous or arrogant in me to array myself on the negative side of this question, and in opposition to such men as Von Thaer, Liebig, and a host of others. With all due deference to their learning, I think they start on false principles."

"We have no idea that "grown up" farmers are generally to be benefitted by lectures on Agricultural Chemistry. But if taught at school, it would be to the man all his life an interesting and valuable accomplishment. That chemistry may throw light, however, on the constituent elements of soils, food, plants, and manures, who can doubt? Dr. Higgins, the State chemist of Maryland, has, by analysis, detected deficiencies and impurities in various artificial manures, and given most salutary advice on the subject to the legislature and farmers of that State."—J. S. SKINNER.

In reply we introduce our ideas written at the time.

A correspondent in the "Plough" appeals for a judgement against the extension of agricultural chemistry amongst practical farmers—situated as you are, the agent for the transmission of the ideas of your readers, it is prudent in you to withhold your decision and await a more ample examination of details. It is but just to allow those who have seen chemistry carried into practice in the field and garden, and witnessed its real capability to define and regulate material laws, and explain and exemplify actual operations, which though slow and hidden in their progress, act upon and in the end govern the great and fundamental operations of those whose office it is, from the willing and almost mysterious earth, to produce the Pabu-

lum of our existence. For what is the bosom of the earth but a great retort in which the Creator has mingled the essential elements of matter?—himself the great manipulator, mankind but his assistants—insignificant indeed they are, and blind, but feeling around them for some path to lead them into the light and open way. Let those whose eager desire to grasp at the substance, take heed, lest they indeed overlook the primary laws by which their puny operations are regulated; let not the ignorant farmer imagine that while he laughs at the agricultural chemist and his theories, he carries on his pursuits without him; and let not the husbandman who sees in his barn orgranary, the fruits of his industry stored up, boast that they are so, without his knowing botany or vegetable physiology, or chemistry; other less fortunate individuals have preceded him and cleared away the rubbish, leaving him a clear path, and he takes advantage of their hard labors without knowing the obligation, or acknowledging the benefit. Nay, sometimes the practical man treats with scorn and contempt the earnest assurances of the man of science, when he tells them that without a knowledge of the laws of matter he only plods on in the darkness of past ages. Why does the farmer add lime, charcoal, nitrate of potash, guano, nitrate of soda, chloride of sodium, (common salt), soot, street refuse, common manure, night soil, &c., &c. to his field and garden crops?—simply because chemists have discovered the necessity of these substances to the development of the vegetable organism. Why has the venerable Liebig spent his days and nights in an unwholesome laboratory, exhausting his physical energy, if not to benefit mankind? Why do the enlightened portion of the citizens of this republic listen with attention and contribute to the support of Johnston of England in this country and his own? Why did Sir Charles Lyell risk a laborious journey over the "States," if not to arrive at some truths and collect some useful information? And when the name of Humboldt occurs, do we not revere the ardor of that spirit which made all difficulties disappear in order to search into nature.

Pardon me for suggesting to you, sir, the necessity for a fair and full investigation of the claims of agricultural chemistry to the notice of practical men. I have seen its utility tested in the case of that unfortunate country, Ireland—for when all other projects failed, the British government established a system of agricultural education, blending science with practice, which promises to do something, and a great deal towards the amelioration of the distress which causes Ireland to be a reproach to her proud mistress England.

The largest known flower in the vegetable kingdom, larger than the Victoria Lily, is the flower of a plant called *Rafflesia Arnoldii.*

REPORT ON AGRICULTURAL SCHOOLS IN IRELAND.

BY DR. KIRKPATRICK, AGRICULTURAL INSPECTOR.

Dublin, April, 1851.

To the Commissioners of National Education.

GENTLEMEN:—In submitting my Third Annual Report on the Agricultural department of the system of National Education in Ireland, I beg to congratulate the Commissioners and the public on the steady progress it continues to make, notwithstanding the various counteracting influences with which it has had to contend.

At the date of my last report there were thirteen Model Agricultural Schools in operation, and ten for which building grants had been made. At the present date there are seventeen in operation—five in partial operation, and three in course of building.

In the district Model schools having agricultural departments in connection with them, the "pupil-teachers" attend the lectures of the agriculturist, and receive practical instruction on the model farm attached, in the various operations of which they are required to assist at specified times. Though objections have been urged against this arrangement, as calculated to interfere with the *special* objects of their training, and though, I regret to find that, in one instance, some reluctance has been exhibited by the pupils themselves as to taking part in the drudgery of agricultural labor, still I think it can be carried out so as not only not to retard, but, as I believe, to promote their advancement in the other departments of their study, by training them to habits of industry, showing them how they may turn every hour of their time to profitable account, and invigorating their physical, and, consequently, their mental constitution.—"The vigor of the body imparts itself to the intellect; and not only relieves the monotony of the school-room by the alternate labor in the fields, but it gives zest and energy to the powers of the mind." As to the objections of the pupils themselves—if they are the offspring of *false* pride, I think a little reflection should be sufficient to show their absurdity. Why, instead of its being a degradation to assist in even the lowest offices of agricultural labor, it should, to every sensible mind, form an additional ground for esteem and approbation. In proof of this I might cite many instances of individuals of high rank and attainments who considered it an honor and a happiness to share in this employment; but I need not go farther than our own day, our own country, and our own schools, to find an instance in which a gentleman of high acquirements, and independent fortune (the brother of a baronet and high sheriff of one of our eastern counties), in order to acquire a perfect practical knowledge of agriculture, entered as an extern pupil at the Glasnevin establishment, and cheerfully assisted in all the farm operations. I have seen him* with his coat off laying tiles in the bottom of a drain, and joining in every other kind of labor on the farm—yet he never thought it any degradation to be so employed; and I think it would be an insult to common sense to ask whether he, or one of the same rank, who would be afraid to soil his fingers, should be entitled to the most respect.

If the objections are made on the ground that it is *useless* to require them to assist in or learn the practical details of farming, as such is not the profession they are destined for in after-life, I would ask is it useless that their physical constitutions should be improved,

* Vere Foster.

which can be effected much better by a little useful labor, than useless, and, perhaps, often injurious amusement? Is it useless to train them to habits of industry? or are their circumstances in after-life likely to be so independent, as that their being able to add to their comforts by the skilful cultivation of a plot of ground in their leisure hours should be of no importance? It is not improbable but the majority of them, when their course of training is expired, and they come to conduct schools themselves, may be able to procure a small portion of land in connection with their schools or with their dwellings; and from the agricultural instruction they have previously received, they will be enabled to act in the double capacity of literary and agricultural teachers, if the latter should be required. They will at least, as I before remarked, be able to turn their leisure hours to profitable account, thereby improving their health and circumstances, as well as their status in public estimation; and affording to the surrounding peasantry a model of thrift and industry which cannot fail to be productive of beneficial results. * * * * *

In concluding my Report for the past year on the system of Agricultural Instruction, I think I may, with greater confidence than ever, indulge the hope that it is destined amply to fulfil all the anticipations of its founders. Though its progress has been, and still continues comparatively slow, owing chiefly to the general depression which yet unhappily exists, though it has not put forth many branches, it has, at least, established its roots firmly in the soil. After another year of trial, during which its operations have been anxiously and minutely watched, I am convinced that it only requires to be more extensively established to become an efficient agent in the elevation of our island to that standard of prosperity which its many natural advantages so eminently fit it for attaining. In attaching so much importance to an agency of as yet so comparatively limited operations, I may be considered by our opponents (of whom, no doubt, there are still many, though their number is happily diminishing before the light of experience), as an interested partisan, or a visionary enthusiast. Nevertheless, I state but my own sincere conviction, arrived at by careful inspection and anxious investigation, and fortified by the testimony of men, whose opinions are entitled to the highest consideration. On my various tours of inspection during the past year, I have made it a special object to ascertain the views of men of station and intelligence on this important subject. Circulars have also been transmitted to the Patrons and Managers of the Agricultural Schools longest in operation, and the replies received bear testimony to the truth of what I have here asserted. It is true, that of the present class of small farmers in Ireland, but comparatively few, living in the neighborhood of the Agricultural Schools, have adopted many of the improved practices they saw there; but any person conversant with the social condition of the country, will find many causes which sufficiently account for this apparent apathy to improvement, not the least prominent of which is the general absence of information, and want of early training in correct and rational principles—"we must," as has been truly said, "educate the child, if we would reform the man." To remove this barrier to our social progress is the great object of the National Agricultural Schools. When this has been effected, as under Providence it shall, if those entrusted with the arduous, but honorable task of removing the ob-

stacles by which ignorance and prejudice have long blocked up the avenues of improvement, are imbued with a thorough devotion in the cause, it may be confidently hoped that the result will be speedy and unimpeded prosperity.

Let not those who, in any way, can aid in effecting so desirable a consummation, refuse to do so because the good effects of their labors are not immediately evident. The seed is committed to the genial earth, but it does not spring up immediately, and requires time to develop and perfect its fruit; so in like manner the seeds of instruction and industry implanted in the minds of our peasant youth, will require time and patience before we can witness the harvest of prosperity which will not the less surely follow.

IMPORTANCE OF DEEP AND FINE TILLAGE.

The parching weather which has prevailed for some time past will show the advantage of deep and fine tillage in a striking point of view. Wherever the soil is deep and finely pulverized the drought will be excluded, and vegetation escape comparatively uninjured; whereas, under different circumstances, the ground will have become filled with fissures, which admit of the escape of the moisture of the soil, and expose the young roots in a manner which insures the destruction of the plants, or very seriously interferes with their progress. On one side of a fence the young braird may be seen parched up, and on the other it will be healthy and luxuriant, the only difference in the one case from the other being, that a deep and fine soil prevented the undue evaporation of moisture essential to vegetation, in the one case, and the fissures with which the surface became permeated in the other, fabilitated its escape.

It is almost unnecessary to add that a fine tilth can only be secured by complete drainage when the land is moist, exposure during winter, and the absence or any traffic upon it in wet weather. Land saturated with wet in winter cannot be brought to a fine state in the summer, even by the most skilful labour, and, on the appearance of dry weather, it readily parts with its moisture, being thus subjected to the two extremes. Nor without exposure during the winter can the soil be made fine, a fact which is familiar to every farmer when he comes to harrow newly turned up earth, which, under such circumstances, can only be reduced when the ground is in a state of high fertility. Again, working the land in wet weather, especially if not thoroughly drained, is highly injurious to it, producing a degree of consolidation afterwards not easily removed.

Deep and fine tillage is advantageous with every crop, but for green crops it is absolutely essential. The turnip, beet and all similar plants are exceedingly delicate in the early stage of their growth, the young fibres of the roots being particularly susceptible of injury by exposure; and any check to the progress of the crop at this stage materially retards its after growth. The vegetation and early brairding of these plants are, in fact, the critical points connected with their culture. They are then extremely delicate, and if not pushed on vigorously they become stunted and rarely make much progress afterwards. At this period the value of high cultivation is seen in the rapid progress which the young plants make to get over the early stage, and the security which is provided against failure. When a

second sowing is made from the failure of the first through any cause, it is well known that the result is rarely successful; but this is to be guarded against more securely by the soil being in a proper state than even by liberal applications of manure.

One of the peculiarities which impart value to farm-yard manure is its plentiful application being ancillary to a highly pulverised state of the soil. In heavy lands, especially, the soil is kept loose by the manure, and hence one of the great grounds of superiority of this substance as compared with the portable manures; for, although the latter may supply the ingredients which the land require, they exercise no perceptible mechanical effect upon the soil. Nothing can, in fact, make amends for the absence of that finely comminuted state of division which farmyard manure so much aids in producing.—*Dublin Nation.*

M. J. BERKELEY ON THE SELECTING POWER OF PLANTS.

Plants have no power of selecting their own food, but imbibe whatever is mixed up with the moisture contained in the soil in which they grow; and though a certain porportion of the necessary elements is requisite for the healthy normal growth of each particular species, a derangement of this proportion within moderate limits is not necessarily injurious; yet if it be materially altered, cultivation either becomes entirely impossible, or diseased action takes place. Thus in the neighborhood of certain chemical works we constantly hear of greater or less damage to the surrounding vegetation, ending either in palpable disease or actual death. In these cases the air is almost constantly charged with noxious matter, and comes in contact with the tissues by means of the stomata, but to a far greater degree, doubtless, by the absorption of the surrounding atmosphere by the soil in which the plants grow. But even where this continued supply of noxious air does not take place, the following fact will perhaps tend to show the baneful influence to vegetation which may arise even from any great temporary derangement of the atmosphere from which so large a portion of the nutriment of plants is actually derived, long after the cause has been removed.

A collection of plants consisting principally of half-hardy Cistuses, Brooms, and composite plants from Portugal, was placed in the wide windows of a school-room where they were flourishing to a degree which gave great promise for the ensuing season. At this time a chemical entertainment was given in the room, which, as it dwelt principally on explosive matters, such as gunpowder, detonating compositions, colored lights, and phospuretted hydrogen, caused a great escape of various gaseous matters materially affecting the composition of the air contained in the apartment. The concluding blue signal light made it impossible for the spectators to remain much longer, and a hasty retreat was made. The room was cleared the next morning and ventilated, and in the course of a few days some of the plants were evidently much affected. Two months have now elapsed, and the diseased action is still going on, showing itself in the splitting of the leaves and occasional death, while other plants, which were at first materially injured, seem to be making a new growth from below. It is impossible to say to which particular experiment the misfortune is due, but it is easy to understand that these noxious gases,

or even those which contribute to the wants of vegetation in undue proportions, having been once imbibed by a retentive substance, like *humus*, will be parted with gradually; and, where matters so liable to chemical change as the lining-coat and contents of vegetable cells are concerned, disease is almost certain to ensue.

It is not surprising that interested parties should deny the noxious effects of the substances with which they poison the air, which is to a far greater extent than they are probably aware the vehicle of nutrition to vegetables; but those who are called in support of their notions would do well (except the love of science be far inferior to more worldly motives) to weigh well the circumstances on which vigorous health in plants depends, and they will most assuredly discover how slight a cause is capable of exercising a very powerful action, and that any considerable admixture of heterogenous matter cannot fail after a lapse of time to act injuriously.—*Gard. Chron.*

The Laborer's Wish--By Eliza Cook.

I never murmur at the lot
That dooms me as the rich man's slave;
His weekly ease I covet not—
Nor power I seek, nor wealth I crave.

Labor is good, my strong right hand
Is ever ready to endure;
Tho' meanly born, I bless my land,
Content to be amongst its poor.

But look upon this forehead pale,
This tintless cheek, this rayless eye;
What do they ask? The mountain gale,
The dewy sod and open sky.

I read of high and grassy hills,
Of balmy dells, and tangled woods;
Of lily-cups, where dew distils,
Of hawthorns where the ring-dove broods.

I hear of bright and perfumed flowers,
That spring to kiss the wanderer's feet;
Of forests where the young fawn cowers,
Of streamlets rippling, cool and sweet.

The radiant summer beams may fall,
But fail to light my cheerless gloom;
They cannot pierce the dusky wall,
Where pallid fingers ply the loom.

No warbler sings his grateful joys;
No laden bee goes humming by;
Nought breaks the shifting shuttle's noise,
But angry oath or suffering sigh.

Pent with the crowd, oppressed and faint,
My brow is damp, my breath is thick;
And, tho' my spirit yield no plaint,
My pining heart is deadly sick.

I cannot see the blue of heaven;
I cannot see the green grass sod;
I pant to share the blessings given
To all and each one by a God.

Give me a spade to delve the soil,
From early dawn to closing night;
The plough, the flail, or any toil
That will not shut me from the light.

I often dream of an old tree,
With violets round it growing wild;
I know that happy dream must be
Of where I played a happy child.

A dog-rose hedge, a cottage door,
Still lingers on my wearied brain;
I feel my soul yearn more and more,
To see that hedge-row once again.

Double the labor of my task,
Lessen my poor and scanty fare;
But give, oh, give me what I ask—
The sunlight and the mountain air.

☞ The Committee on the Moore Testimonial has been pretty successful, having added to the list of subscribers most of the distinguished *literati corps-diplomatique*, aristocracy, and literary democracy of Britain and Ireland. The Irish in America are compelled to move soon, for the sake of liberty, and the man who has written the history of their native country, free from foreign influence and sectarian bigotry. A requisition for a meeting is in preparation. Moore's memory has claims on Americans—he was the guest of America in the early days of the history of the United States—he wrote their boat song, and described the striking portions of northern scenery. Let his memory be cherished.

The Florist and Horticultural Journal.

Philadelphia, June, 1852.

We need not commence on the 21st of May to tell our friends and supporters how to manage their spring operations; for the majority of amateurs have "fixed up" in their yards for the summer. A few will want the gardener's hook or scythe periodically to trim their grass plat; and some will allow him to extend his care to the stirring of their flower border with the rake; many attend to both themselves; we think they are right—the gardener will not lose much by this. Most persons who intended sowing annuals, have already done so; small lawns are laid down with mixed lawn grass, obtained ready mixed of the seedsman. We hope they may be pleased with their grass plot when it vegetates, for many are disappointed; in fact, few take the necessary precautions to insure success. They do not dig deep, and get soil minutely pulverised; they do not roll it properly after being dug; they do not rake it properly; they do not take care to banish a quantity of worms who cut up the surface after seed is sown; in fact, they do not lay down their plot in grass, but scratch it up and scatter the seed. We astonished a very learned amateur a few days ago, when on enquiry as to the proper depth to dig his yard, we replied spade deep. Oh nonsense, said he—but did not wait till we had finished, and he misunderstood us.

To those who have not been successful in their grass plot, we would say procure good loamy soil, dig it spade deep; tread it or roll it; rake it until all lumps are taken off and it becomes quite level—at least with no inequalities of surface; sow the seed which should be in several sorts—clover a large proportion, sweet vernal grass, (*Anthoxanthum odoratum*); also a large share sheep's Fescue, (*Festuca ovina*), Timothy or Herds grass, (*Phleum nodosum*) and Cock's foot (*Dactylis glomerata*,) with a quantity of *Lolium perenne*, or perennial rye. Now to procure all these in mixture, the necessity of having to purchase the grass seed already mixed is obvious, for the amateur who wants sixpenny worth cannot purchase a cents' worth of each, but he has them already prepared, and trusts to the honesty of the mixer. We may state that many other sorts of grass seed may be substituted for some of the above mentioned; take care however to have White Clover, sweet vernal Timothy, and Perennial Rye. For shady places take in preference Dactylis or Cock's foot, called Orchard grass; for parched and dry situations prefer Poa or Meadow grass; and Sheeps' Fescue instead of Sweet Vernal and Perennial Rye. However, few

agree as to these matters. When the sod vegetates, roll it well, or tread it; then cut it frequently for the first season, water with a little guano water, and sprinkle it with charcoal or some chemical manure, such as nitrate of potash and gypsum—soapsuds cannot be beat. Do not let the dogs and cats destroy it, nor allow the bones from the *cuisine* to be deposited on it, for the gardener's hook suffers thereby no less than the grass itself.

We have done with grass plats for the season; fall is the best time to lay down lawns, however, against which time we shall prepare a more extended routine of cultivation and preparation. We observed a few days ago a systematic process for sowing lawns at the Pennsylvania Hospital; we admired the equality of surface and care exhibited in sowing the seed—all who observed it had a good lesson on lawn culture. Almost all annuals have been sown; some of our gardening cotemporaries furnished lists of the most desirable sorts. Annuals, when sown out doors in May, give little satisfaction; our spring does not suit their quick development, and the frosts of autumn reach them before they are fully in bloom. The better plan is to sow the best sorts in the fall in boxes, keeping them from frost during winter to bloom in March, April, and May, such as Stocks, Wallflowers, Sweet Williams, (Dianthus barbatus), Chinese Pink, Carnations, *Schizanthus Nemophilas*, *Collinsia bicolor*, and the new sorts Mignionette *cineraria*, a perennial; *Calceolaria*, perennial; Pansies, imported seed; *Ipomœa limbiata*, *J. Burridgii*, *Ipomœa Quamoclit*, cypress vine; *Eutoca viscidea*, *Phacelia tanacetifolia*, Asters in sorts; *Clintonia pulchella*, *Grammanthes gentianoides* (see plate); but the variety is endless, and we are a little late in advising;—look out, however, for this list in the month of October, act thereby, and you will not be disappointed.

Verbenas are in crowds in our market, Roses in hosts—some tall for the rear rank, the dwarfs must he kept in the front; "yard long" Prairis are in demand for running, they will supercede the running, creeping or trailing plants called VINES—no matter whether they produce the alcohol or not. The old *Vitis vinifera* however, maintains its character, and we hope always may, it is so practical in its associations; and its juice no doubt helps the poet out of many a puzzling measure. The yards have had sufficient attention we hope, both from practical gardeners and practical writers; some have been neglected, and still lay gasping for some pure air, and sun, and moisture—oh ye wicked gardeners, why cannot you do all at once! The windows are in full display—Jasmines, Heliotropes, Fish Geraniums, Rose Geraniums, Waterloos, Apples, Pennyroyal, Nutmeg, and all the other familiar sorts are in bloom; Pansies, Verbenas, Roses, Callas, and a multitude of others luxuriating through the wide streets and squares of famed Philadelphia, with plenty of air and light, and no doubt suffi-

cient water, for who would allow a favorite plant to thirst for water? Do not water the plants while the sun is on them, but prefer watering on the surface of the pot in the morning and the foliage in the evening.

Our Friends and our Censors.

How many friends can the "Florist" reckon?—we dare not tell. How many censors can we enumerate?—we do not wish to say; those we have are severe. We do not thank Snooks or Jones for their officious advice—nor indeed do we value the flattery tendered by Smith and Brown; we cannot sell it nor trade it—it is not marketable. "Of all who tickle when they touch, clothed in rags or dressed in ermine, flatterers are the most teasing vermin."

Baltimore, April 7, 1852.

Dear Sir—I am in receipt of a prospectus of the "Philada. Florist," and approve highly of the design. I will do all in my power towards its circulation in this vicinity, and I doubt not will find you a few subscribers. . . . I shall embrace every opportunity of bringing it before the notice of gardeners and amateurs. W. S.

Meadville, May 3, 1852.

Dear Sir—I gladly received your first number of "Philada. Florist" on Saturday. I have only had time to look at it, not read it, so I have nothing of criticism to offer. In lieu of that, I send you six subscribers, with six dollars. J. M.

"The Philadelphia Florist," is the title of a new Magazine, devoted to Horticulture, Botany, &c., just started in this city by a committee of practical gardeners, under the editorial charge of R. R. Scott. The contents of the first number are spirited, and if the Magazine is continued as it has begun, will greatly advantage those engaged in the cultivation of flowers.—*Dol. Newspaper.*

"The Philadelphia Florist and Horticultural Journal." The first number of a new monthly periodical with this title, has just made its appearance, bearing upon its face the evidence, we think, of success. It is an exceedingly well got-up work, and the editor is a practical gardener, who understands, perhaps, the aims and objects of such a publication, and the way to accomplish them as well as any other man. The initial number, we repeat, has a *character* about it which we much like, and which we are very certain will secure for the work that degree of support which will not only secure its permanency, but also remunerate properly the undertaking. When we say that the price of it is only one dollar a year, it is to be presumed that no gardener, or those who have a garden, will fail to pay it.—*Germ. Tel.*

"The Philadelphia Florist" is the title of a new monthly Magazine, devoted to Horticulture, Botany, and the kindred sciences. This is a work which should be in the hands of every Botanical student and practical gardener in the country. It supplies a desideratum long needed by the lovers of Horticulture, and from the excellence of the initial number now before us, will, no doubt, supply in future numbers that variety of information so generously and judiciously put forth

in the present. The first number comprises 32 8vo. pages in cover, embellished with a beautifully colored botanical print. The typographical execution is exceedingly neat, being got up in the office of our old friend and Bro. B. MIFFLIN.—*Masonic Mirror.*

Gardeners and Association.

The horticulturist censor, Jeffreys, writing of the improvement of gardeners says:—"There is nothing like association for improvement in anything worth improvement at all. The great difficulty in the way of association in this line, is the jealousy and rivalries of our gardeners. They are mostly foreigners, and though clever men apart, have too much the spirit of the Fardowners and Corkonians when brought into competition. I do not mean anything offensive, my good friends, but I know a dozen excellent gardeners all "old countrymen," in my neighborhood, clever, honest, upright men all; but they are too jealous of each other to associate and mutually improve."

Soft sawder this. Wherein consists honesty of purpose, uprightness, cleverness, if not in recognising our fellow laborers as brethren; and aiding them when they require aid, helping them to elevate themselves, and looking on their success as only the next step to our own. We know a hundred gardeners in our neighborhood, who know nothing about jealousy at a rival gardener's success. More than this number, who do not know what a "Fardowner" means. But alas, they are always down on the Celt, and he deserves it all. The late exhibition proves that gardeners can associate.

CALENDAR OF OPERATIONS,

TO WHICH IS ADDED THE NATURALISTS' CALENDAR.

Written by Practical Gardeners, for the Philadelphia Florist,

We now luxuriate in a different climate. Philadelphia and its environs has put on another aspect since last we spoke of the routine of operations usually recommended. We have opened our eyes to behold the changeful season of Winter and Spring almost settle down into the heat of Summer; and no doubt all who survive a few months will eat Fall fruit. The dreadful Winter having done its worst, did nothing but its duty; and though Spring was shy in "taking up the tale," yet all things are certain which are in the law of nature. We see trees in rich foliage in our squares—the proud birds of Juno plume their feathers, and the flowers succeed the leaves, and fruit the flowers. The insect world is full of life, and the pretty inhabitants of the woods charm the eye of the Botanist, who finds "sermons in trees, books in the running brooks, and good in everything."

Our last Calendar was brief read, now our more extensive and

practical calendar, not overlooking the naturalist's part, prepared from observations taken during the past few days around the city. The Botanical portion by Thomas Hutchinson, and the Entomological by Hobson & Ridings. Dr. Conrad of the Penna. Hospital furnishes the state of the thermometer.

CALENDAR.

Plant-houses are now almost emptied of their contents, or at least should be—we observed yesterday a great many plants *bedded out*. Such as *Justicia carnea*, scarlet and other Geraniums, Canary Bird Flower, Petunias, Verbenas, Pansies, *Alonsoa* or *Hemimeris*, *Anagallis*, *Grammanthes*, Antirrhimum, Lobelia, Cypress Vine, all kinds of Morning Glory, and Burridges Morning Glory amongst the rest. We are looking out for an Evening Glory in the way of a fine *Œnothera* perhaps *Eucharidium grandiflorum* will be the plant—it belongs to that tribe and is greatly cracked up, perhaps by interested annual growers. *Grammanthes* is the Day Glory, for it hates to see the dewy shades of evening; loves the sun as well as any *Heliophila* or sun lover. Get out all plants not already removed; repot those which require it, take care to put them in a shady place after their removal, until they *take to* their new pots and quarters. Look out that you do not expose Fuchsias, Heaths, Epacrides, Azaleas, Rhododendrons, and other similar plants to the sun and rain.

Flower Garden.—Bed out! Bed out! every one is at it, nothing stops them; Abutilons, Salvias, Calceolarias, Cinerarias, Pelargoniums, Fish Geraniums, Fuchsias, Lobelias, Hemimeris, Anagallis, Stocks Wall-flowers, all the host of tender annuals, Convolvulus or Morning Glory, Ipomaea (*Burridgii*) Burridges Morning Glory. I limbiata margined morning glory (quite new imported by J. F. K.) Grammanthes gentianoides, Dahlias, in innumerable sorts, they are in the schedule of prizes for the Horticultural Annual Exposition in September—although rejected in all respectable exhibitions in England—so that the extensive growers should attend to them.

Cacti you need not plant out, keep all you have got, they will be wanted in September next; you may preserve even the commoner species—we want a strong muster of the hedgehogs (*Echinocactus*) let them not be "snubbed," "abused," or slighted, they belong to the vegetable kingdom as well as the Dahlias and Cape Heaths, are brethren of the Victoria regia. Philadelphia has Cacti, and Cacti have friends, all observations to the contrary, notwithstanding. Take care of *Epiphyllum alatum*, *Hookerii*, *speciosum*, *Jenkinsonii*,;—Cereus Maynardii, *Scottii*, *grandiflorus*, and many others. Attend to the Mammillarias; remember the *Pereskia Blio* and rats tail, Turks Cap, and Prickly Pear, Cochineal, and Cactus speciocissimus,—the Mexican volunteers know all about them; keep them well watered through the summer while growing, expose to the sun, on a bottom of coal ashes, or gravel, in pots—shift first, all which require, it and all will be right.

Pelargoniums are now in full vigor; those lately exhibited at the Museum were splendid specimens, and almost given away, as to price; Fuchsias were very choice there also; Snow-drop was a striking plant. Fuchsias are easily grown, if proper care be taken at a pro-

per season, never allow the young plant to stop growing, until it attains its desired size and shape, then check it by withholding water, (not too much),—a tendency to produce flowers will then be induced.

FRUIT HOUSES—forcing has been attended to at several places; Strawberries ripe ; set the plants, from which fruit has been gathered, to rest at leisure ; plant them in good, richly manured soil, to recruit them. CHERRIES are ripe in a few places ; Nectarines far advanced, and fruit well set—out-door strawberries look well (and in fact all out-door fruits). GRAPES are in fine condition, as the atmosphere has been clear and not very changeable ; attend diligently to stopping of shoots, they must be stopped judiciously, or a waste of the energy of the plant takes place, see Mr. Sanders Diary—air those in flower well, to scatter the pollen; no water while in flower from the syringe, it wets the yellow dust and hinders impregnation; watch all well, and attentively.

VEGETABLES.—TOMATOES are in market; PEAS from the south and from under cover; any quantity of Asparagus, do not let it be cut too close, add some manure and salt after cutting; salt in June and manure in fall. BEANS are getting forward ; CANTELOPES planted out as well as all other tender crops ; sow in regular succession ; tie up TOMATOES or confine them with stakes, like trellis work.

POTATOES are up; we saw a fine specimen of mercers, yesterday.

SALADING is in abundance ; spinach out of repute ; sow, however, in succession to fill the pot, as the Irishman says, "fill up, fill up, if it should be only saw-dust;" take peas in good season, you cannot afterwards; you may try, but you will fail ; LIMA BEANS ; take care of Limas, they create quite a furor when on the table. Try the NEW ZEALAND SPINACH, BLACK TURTLE BEAN, WALCHEREN Cauliflower, HOBSONS Giant RHUBARB, OKRA of course, mountain sprout, and mountain Sweet Water-melon, Caubul Cantelope, GREAT MAMMOTH SQUASH ; BISHOPS' DWARF PEA, PRINCE ALBERT Do., SKIRVINGS IMPROVED RUTA BAGA, for July or August sowing, Cabbages all sorts, to be found in the seedsmens' catalogues, to be had at this office. But we must close, by telling all our gardening friends, to work, rather than read for two or three weeks to come. *Allons!*

NATURLISTS' CALENDAR.—BOTANY.

1 *Anemone* nemorosa, Wood Anemone, Woods, Penna.

2 *Arum* triphyllum marshes and shady margins of creeks var atro-rubens.

3 *Agrostis ;* several species a grass, fields.

4 *Acer rubrum* and others in flower, in April, scarlet or yellow bloom—swamp maple (every where ?)

5 *Actæa* rubra, red Baneberry—Woods.

6 *Aster* or Erigeron, Woods, Penna.

7 *Dicentra* cucullaria, (Cultivated R. Kelv.)—Dutchmans Breeches —Woods, not frequent.

8 *Cardamine pratensis*, marshes, Penna. cuckoo flower or meadow cress.

9 *Draba verna*, common Whitlow Grass, (in pod May,) (plenty.)

10 *Geranium* maculatum, woods, Penna.

11 *Orchis* spectabilis, (Jersey showy orchis.)

12 *Physurus* pictus, woods, Penna.

13 *Podophyllum* peltatum peltate leaved May, Apple.

14 *Polemonium* Greek valerian not repens but officinalis ? woods plenty, Penna.

15 *Silene* Virginica, cultivated R. Kelv.

16 *Viola* yellow, light blue, and white and many others—for which we have not space.

STATE OF THERMOMETER.

Mean temperature for the month, 46.6°; Mean Maxima, 52.6°; Mean Minima 46.6° The mean for April for 22 years is 52°. Amount of rain, 6.44 inches—this is a greater amount than has fallen in any April except one, April 1841.—Snow fell upon 4 days, rain upon 21 days. The mean temperature for May up to the 18th, is 61.7°, and the amount of rain 1.75 inches.

Pennsylvania Hospital, May 19, 1852.

☞ Botany is not current, therefore, we do not publish any Botanical description of Plate I. nor of any of those in our present No.

☞ Thos. Meehan's contribution never reached us; nor that of R. L. Colt, until yesterday, and opened—we refused it at the Post Office; nor that of A. L. Kennedy, said to be delivered at our Office. We have, therefore, removed to 63, Walnut St., at Mr. Benjamin Mifflin's, the Printer of the "Florist," where all communications, plants, fruit and papers, are to be sent. We would warn our subscribers in the country, from enclosing money, unless they register their letters.—Office, No. 63 Walnut Street, below Dock, North Side—Third story.

☞ The Plates were executed at the School of Design, under the superintendence of A. Hill. Descript. of Grammanthes in our next.

DESCRIPTION OF PLATE II.

Nepenthes Rafflesiana, N. ord. Nepenthaceæ, Class Diæcia, Native of Sumatran Islands.

Sir S. Raffle's Pitcher Plant, Introduced by Jas. Dundas.

One of the curiosities of vegetation—a receptacle or reservoir for water in the marshes of hot and tropical climates, where at certain seasons the parched traveller searches in vain for the indispensable element. The birds that flit around the Pitcher Plant, dip into its cup and are pleased to find that there is therein wherewith to allay their thirst, so that they may continue their joyous chirrup or song. It contains distilled water in the appendages to the petiole or leaf stalk which is dilated, the operculum or lid (botanists are agreed) is the true leaf—it closes over the vessel and hinders quick evaporation during the extremes of the sun's heat. The plant was introduced in quantities from the Sumatran Islands and Borneo by Mr. Low, through the means of Rajah Brooke. Many were dead. The plant is now well dispersed amongst those who can cultivate it, it costs high at nurseries. The plant from which our Plate was taken was imported by Jas. Dundas, Esq. from London, and has been successfully cultivated by his gardener, Mr. Jas. Bisset, Sr., who kindly furnished specimens for that purpose. Of its cultivation we shall permit Mr. Bisset to speak next month. Mr. Cope and R. Buist, and we believe P. Mackenzie imported it dead.

PLATE III.—Is the new, white, stately Bell flower, Campanula nobilis alba, exhibited at stated meeting of the Pennsylvania Horticultural Society, April 20th, and is presented to his numerous supporters by R. Buist, the grower, Rosedale.

INTRODUCTION TO LECTURE

ON THE

CURIOSITIES OF VEGETATION,

AT CHINESE MUSEUM, MAY 14, 1852.

It is interesting to examine the history of the objects which for the most part serve us for food, and supply to our domestic animals also, the requisites for their maintenance, many of which in turn are appropriated to the uses of the *cuisine*, the animals having assimilated the herbs which are cultivated as forage to their own organization, and rendered it more appropriate to our use. Many argue that we err in depriving cattle of life, in order to convert them into food. I fear some time will elapse before the error be abandoned. I would not say that these do not state the truth; man is so formed as to assimilate vegetables to his own system; and though it may be more convenient to seize upon the already prepared matter—yet surely the cow and sheep were not created to be slain by man. It is also interesting and useful to know how many of the drugs which we swallow from year to year are taken directly from plants—how many of our garments are preparations of vegetable life, converted by art and through the aid of machinery to that state in which they fill the stores and warehouses of our merchants. But in one lecture I could slightly touch upon these matters; the subject is endless. How many separate and distinct plants are known to Botanists, is a question which no doubt occurs to many persons. These we term species or distinct individuals, as for instance man himself, or the dog, both of which remain unchanged, it is believed. I have mentioned man, because it is sufficiently evident that he is distinct from all other creatures; that he does not become by change of climate, food or locality, any thing else than a reasoning, reflecting being, speaking and acting with a free will, when permitted to do so, independent, as we term it, of any foreign or exterior agency. The cat also retains its carnivorous, prowling, nocturnal character and habits without alteration unless so by force or interference with the provisions of nature. Then why should not also plants preserve their individuality distinct? They do, it is believed. A species then is a distinct organized being. The number of species of plants described by Botanists up to within a few years ago, was, according to Loudon's Encyclopœdia, first additional supplement, published in 1832, 18,109; according to Lindley's Vegetable Kingdom, 2d ed. 1847, 92,000; enumeration of species known to Botanists according to Humboldt, 86,000 in Delessert's Herbarium Paris, 74,000 Royal Herbarium, Schoneberg; 26,000 enumerated in Loudon's H. Brittanicus, 1832. But as yet no authentic enumeration has been or can be made without the co-operation of Botanists. In the

Botanic Garden of Berlin, supposed to be the most extensive in cultivation, there are of the natural order of composite or compound flowers, as the dandelion and aster, Compound, 16,00; Leguminosæ, 1150, peas, beans, vetches, clover, &c., are familiar examples; Labiateæ, 428, salvia is a familiar example; Umbelliferæ, 370, parsnip, carrot, hemlock, &c., are familiar examples; Grasses, 3544, grasses, as Timothy, sweet vernal, orchard grass, &c.; Cyperaceæ, 2,000, carex, or sedge, numerous in this vicinity. Of the order Compositæ there were known to Linnæus, the great Swedish Botanist, 785 species of compound plants or syngenesia according to his classes. Now there are 12,000 known to Botanists of this most extensive order.

[TO BE CONTINUED.]

The Gardener's Society's Exposition.

Be it known to all men and others, who know anything of Gardening, that the great exhibition of the Gardening Society, is amongst the things that have been. A *fait accomplit*—we would have wished for the sake of the Venerable Horticulturist, who presided over the Committee of Arrangements and a few others unnecessary to enumerate, that he had been supported by better men; we say this advisedly. We could have wished that for the sake of a new charitable institution, the men for whose benefit it was originated had felt their position. We shall say no more, the exhibition was a successful one, and we shall notice it at more length in our next number.

Amongst the contributers, we would enumerate Mrs. Dr. Rush, Jas. Dundas, Esq., F. Knorr, A. Dryburgh. J. D. Fulton, and several others not known to us.

A fine Amaryllis from the "windows," was contributed by Mr. Cresson.

The list of Public Contributors, we shall give at another time.

C. Cope, Esq, sent some fine Strawberries as a Donation, to be sold for the benefit of the Society—also cut flowers.

Thos. P. Croft, contributed seeds for the same purpose. The exhibition lasted four days.

Our Monthly Tour of Inspection.

We stopped at a place in Chestnut street, Florence's we believe, gardener Wm. Furmage. We were surprised to find a neat miniature garden with lawn and borders well kept, and greenhouse and conservatory filled with healthy specimens, a few fine oranges and lemons, good greenhouse plants and tender annuals.

Springbrook — the seat of C. Cope. The lily of course is here —and cacti in *odious deformity*, prickly pears, crabs, hedge hog, mammœs, (*Phyllocacti*). We talk professionally at times though only a Prof. of practical gardening, *all notices at* 20 *cents a line to the contrary, notwithstanding.* Oh, cacti how pitiful are thy griefs, according to a Philadelphia amateur; but here you are at least cared for.

In the stove, the double white Chinese Primrose was in full bloom; this rare plant ought to be more common, for its beauty, as well as its ever blooming property. We were agreeably surprised to notice the double purple here—not deeming its existence possible in Philadelphia from its rarity—a very old but very valuable bedding out plant. Senecio Jacobeæa was in full bloom, a species of Campanula which we believe to be entirely new, with beautiful large blue flowers, and broadly ovate glaucous verticillate leaves. In this house were the Fuchsias in a condition showing that they were not to be classed amongst those things which cannot be grown in America—amongst the most free blooming kinds we noticed Gay Lad, Snowdrop, Princess Alice, and Corallina? The guava fruit, psidium pyriferum was here showing flower. That most desirable of all Acacias pubescens also in flower. In the open ground we were surprised to find the roses uninjured by the severe winter, even the tenderest kinds as Prince Albert, Agrippina, Cels, &c., were apparently in better health and spirits than if nursed in a house. Evonymus Japonicus variegatus had the ends of its branches pinched, but was now shooting. Ilex Europea, (Holly) nearly uninjured, and one grafted on the American opaca entirely so. Several species of broom have also stood well. Acacia Julibrissin seems to have suffered. Pinus excelsa killed.

In the Orchid house, Phalænopsis amabilis, (moth orchid) nearly in bloom, as also was Dendrobium chrysostoma, (golden mouthed dendrobrium).

Orangery—a plant of Cryptomeria japonica, not more than 3 feet high, bearing female flowers, the plant being monœcious or unisexual. New Pines, Abies Smithii, Cedrus Deodara, Abies Douglasii. The gardener intends risking these all out doors next winter.

Cactus house—Several species of Cereus were in flower, also a large specimen of the new Clerodendrum Bethuneanum, (Bethune's Clerodendron,) with large Catalpa like leaves, and a spike of scaly, scarlet flowers. N. ord: Schrophulariaceæ. A fine yellow fragrant Pancratium, a Cape of Good Hope bulb. is in flower here.

Lily house—One bud just peeping above the water, charmed no doubt by the music of the wheel which preserves the water from stagnation. A maranta albo lineata, lined white leaved, arrow root, is worthy notice.

Reported for the Philadelphia Florist.

Pennsylvania Horticultural Society.

When on the 6th of May, Philadelphia witnessed the great parade of Firemen, with their multitude of devices to attract the eye, we feared that Art had overcome her mistress Nature, and the more lasting forms of paper flowers had driven the real petals of Flora from the field. No one complained of the want of fragrance or characteristics of structure; all saw and admired, and were pleased; and nothing was thought or heard of but the firemen and their parade. We murmured, and hoped that other flowers would follow, and that May would not have yielded to June ere Flora the real had regained her throne. It has been so; for five days the saloons of the Museum were crowded with flowers, and persons to admire them. On the 16th many were transported to new owners; and on the 17th a rare and choice display at our Hort. Society proves that the Philadelphia public are not easily satiated with flowers.

The stated meeting was held at the lower Saloon of the Museum, W. D. Brinckle, M.D. Vice President, in the chair. The attendance was large and the visitors animated by an ardent taste for Horticulture and flowers. Many were pleased to receive donations of cauliflowers of enormous dimensions, and flowers from the designs exhibited. We noticed a collection of plants from Mrs. Dr. Rush's conservatory, including the beautiful *Gymnogramma chrysantha*, or golden fern; choice Cinerarias, Pelargoniums, Fuchsias, and many rare plants (not for competition.)

A collection from C. Cope, Esq., gardener Thos. Meehan, containing a Campanula, supposed to be new, from Californian seed, with salver-shaped, rather than bell-shaped flowers, very symmetrical in the bud, and quite desirable; *Sparaxis versicolor*, a pretty Cape of Good Hope bulb; also a Pancratium rather far advanced but very fragrant when fresh; a bulb from same locality; a fine plant of *Pentas carnea*, or flesh colored Pentas, a well known free blooming plant; Hydrangea Japonica; Stapelia Glauca, or carrion flower, a most fœtid flower, belongs to the Stapelia family, like the Cacti in appearance, being succulent, and bearing a dark brown star flower. A small plant of *Buddlea Lindleyana*, Dr. Lindley's Buddlea; Primula sinensis, double white and pink Fuchsias, Lord Sandon, Corallina? Snow Drop, Gay Lad, Napoleon, and Pelargoniums Lady Napier and others; Cinerarias, Senecio Jacobæa, and a Lupin, (Lupinus) we suppose a new (gold hunter's) seedling; a neat specimen of Azalea, variegated, made up this collection; some designs, and a Grape Vine bearing fruit, in a pot, were also contributed by this gentleman.

On R. Buist's table we observed the neat *Zieria trifoliata*, nat. ord.

Rutaceæ or Rue tribe, a pretty greenhouse plant with delicate white flowers and dark green foliage; *Hibbertia Cunninghamii*, a yellow free blooming easily cultivated plant for the greenhouse, nat. ord. Dilleniaceæ. *Eutaxia pungens*, sharp-leaved yew plant, so called from its evergreen dark foliage—quite needle-shaped, with striking papillionaceous or butterfly-shaped flowers, *E. lævigata*, nat. ord. Leguminosæ, a plant from New Holland; *Epacris lævis*, a heathlike Epacris, and *Eutaxia Copelandii*, some fine Pelargoniums Calceolarias, Cinerarias, Azaleas in variety; *Mahernia odorata*, Cuphea platycentra, nat. ord. Onagraceæ, or Evening Primrose tribe, *Cytisus Canariense*, Canary Island Broom; Tremandra verticillata, Tremandraceæ. Crowea, we believe, was there. *Clivea nobilis*, a Cape bulb, *Hoya Cunninghamii*, Cunningham's wax plant; a number of Petunias and other plants completed this various and interesting collection.

B. Gulliss exhibited six Roses—Geant de Batailles, Edward Jesse, Baron Prevost, and two others. A collection of vegetables from Mr. Cornelius' gardener, Thos. Megrahn, of which we have no list. A new plant from Wm. Hobson, a wormy looking specimen of the nat. ord. Boraginaceæ or Bugloss tribe—a gentleman called it *Echium*, from Californian seed. John Lambert, Esq. exhibited a miscellaneous collection, gardener Maurice Finn. Mr. Jennings sent a lot of Tulips, which attracted considerable attention. A spike of the double *Convallaria majalis* or Lily of the Valley, from Mrs. George Bilmyer, Germantown, was observed. If we have overlooked any thing, we must claim to be excused. Hobson's Rhubarb we had almost forgot; his new Phacelia(?) interested us more.

AWARDS.—Flowers Cut, Thos. Meehan, gardener to C. Cope, Esq. Flowers, 2d, John Miller, gardener to S. Lovering, Esq.; Basket of Flowers, Thos. Meehan, do. Indigenous, do.; a collection of plants new, from R. Buist, noticed, containing a Horse Chesnut seedling, and seedling lilacs, with others already enumerated. Fruits—bronze medal to Thos. Meehan, for three bunches Black Alicant,; a special premium to the same for a dish of Strawberries raised under glass. A black Hamburg Vine in pot, loaded with fruit, and cherries ripe from C. Cope, noticed. Pelargoniums, Thos. Meehan; 2d, Wm. McIntosh, foreman to R. Buist. Roses, Hybrid Perpetual, Benj. Gulliss. Tulips, best and named varieties, Wm. McIntosh; 2d do. do.; Plants in pot, collection, do.; 2d do. Thos. Meehan; 3d do. Benj. Gulliss. Vegetables—Best display private gardens; 6 Cucumbers, Ths. Megrahn; 12 stalks Rhubarb, W. Hobson; 2d do. do. H. Cooper; 24 stalks Asparagus, Jas. McTage; 2d do. Thos. Megrahn; special premium Cauliflowers, do.

Committee of Inspection of Gardens—John Marston, T. P. James, J. E. Mitchell, Wm. V. Pettit, and R. R. Scott.

Plate V.

Calceolaria. *Anna Neat.*

THE

PHILADELPHIA FLORIST

AND

HORTICULTURAL JOURNAL,

A MAGAZINE OF

Horticulture, Botany, Agriculture, and the Kindred Sciences.

Conducted by a Committee of Practical Gardeners. R. ROBINSON SCOTT, Editor, No. 63 Walnut Street, between Second and Dock Streets, up stairs.

VOL. I.] PHILADELPHIA, JULY, 1852. [No. 3.

STATISTICS OF HORTICULTURE.

BY THE EDITOR.

Our friend "Duns Scotus" has closed his chapter on the Statistics of American Horticulture. Who else could have written such a brief history? He has asked the readers of the Horticultural Journal to complete the figure,—no one of the many veteran gardeners has been the volunteer historian. "Duns Scotus" could not write of the present as he has done of the past. He is now the moving principle of American Horticulture (or *principal* we should have written it). His feats in Horticulture are known and appreciated—his writings are read and valued, and his person respected by thousands of his supporters. Foreign gardeners owe him much, and many think they owe him resentment; this is their own affair. We shall then take up for him and our readers the tale of Horticultural Statistics, and invite "Duns Scotus" to be our censor.

But we shall require many pages and many chapters of so small a book as the "Florist" to write the history of this beautiful art. Many ideas shall pass before our mind's eye to be rejected or remodelled—many suppositions will be hazarded, many assertions made on slight foundations—yet as few as possible. We shall endeavor to offend none or excite any; to give to all the friends of our profession fair play shall be our aim; to drag no modest man to light who would rather remain hidden, if we can discover his wishes in due time. But the authentic and ample history of American Horticulture must be written by some one; therefore we shall try it.

Twenty years ago—and no doubt this is quite far enough to recede—we should have been puzzled to fill a small green-house with the plants of New Holland or the Cape of Good Hope. Greater and more difficult would have proved the task to collect into one hot-house of

the smallest dimensions of our city hot-houses, the indigenous plants of Borneo and Sumatra and Brazil, Java and Ceylon. Our Parks were then no doubt quite pleased to give support to such pines as *inops*, *Pinsapo*, *Pindrow*, *Abies Webbiana*, and others of this class. The Cedrus *Deodwara* or *Deodara*, as we term it, or in English, Deodar Cedar, luxuriated then at peace on the mountain ranges of the lofty Himalayas, at thousands of feet of elevation; the hot blasts which abound over the territory at the foot of this gigantic Ossa, are cooled before they reach its foliage; therefore a colder climate such as ours does not quite annihilate it—but it does not luxuriate here. Some far-seeing gentlemen amateurs will not plant it, for they say "some twenty years may pass, and then comes a frost, a biting frost, and nips its buds," as Wolsey says; but then some ten years, and the hand that planted the Deodar Cedar in the vicinity of Philadelphia may be gathered to his fathers; and in the classic grounds of the Woodlands Mr. Carvill may prune off for the thirtieth time the dead limbs of Cedrus Deodara, while the short-seeing mortal may slumber beneath its roots. The tall Salisburia waves its branches still in the Woodlands; graves rise up around it, and no murmur of death for the Gingko—it hears no funeral bell. The *Cratægus oxyacantha* grows in the Woodlands Cemetery, and the fine scarlet variety also is healthy and clothed with bloom. The milk-white Thorn becomes red or scarlet and is much admired, but it has not reached that size or form to render the poets lines applicable—

"If Heaven one draught of heavenly pleasure spare,
One cordial in this melancholy vale,
'Tis when a youthful, modest, loving pair,
In others' arms breathe out the tender tale,
Beneath the milk-white Thorn that scents the evening gale."

RAFFLESIA ARNOLDII.

Dr. Arnold's Rafflesia—growing on the stems of plants, such as *Cissus*, and several species of pod plants (LEGUMINOSÆ) in the East Indies and parts of South America, is found this remarkable and anomalous plant, furnished with neither stem, nor stalk, nor leaf; it luxuriates as an immense flowering parisite, its whole structure being condensed, if we may so term it, into a gigantic inflorescence. Its appearance can only be guessed at by those who have not seen either the plant itself or an authentic figure of it. We enjoyed the latter privilege at the Royal Gardens, Kew. The enthusiastic mind of Bauer and his pencil did all for its illustration that could be desired; and the venerable President of the Linnæan Society described it. For a description, see Linnæan Society's transactions. One of the species called in Java *Patma*, is employed medicinally in a very important disease. The following is from a contributor, prepared for the Horticultural Journal:

"Seeing this remarkable flower mentioned in your last number, I conceived that a short account of it would not be out of place. The following description, perhaps by Dr. Arnold himself, is quoted in a letter of Sir T. S. Raffles to a noble English lady:

'The Sumatran name of this plant Petimum Sikinili, or Devil's-Siri (bethe) box. It is a native of the forest, particularly those of Passumah Uln Manna. This gigantic flower is parasite on the lower stems and roots of the Cissus angustifolia of Box. It appears at first in the form of a small round knob, which gradually increases in size; the flower bud is invested by numerous membranaceous sheaths, which surround it in successive layers and expand as the bud enlarges, until at length they form a cup around its base. These sheaths or braces are large, round, concave, of a firm membranaceous consistency, and of a brown color; the bud before expansion is depressive, round, with five obtuse angles, nearly a foot in diameter and of a dusky red. The flower when fully expanded is, in point of size, the wonder of the vegetable kingdom; the breadth across from the top of the one petal to the top of the other, is three feet. The cup may be estimated to contain twelve pints; the weight of the whole is from twelve to fifteen pounds. The inside of the cup is of intense purple, and more or less densely yellow; and soft, flexible spines of the same color. Towards the mouth it is marked with numerous depressed spots of the purest white, contrasting strongly with the purple of the surrounding substance, which is considerably elevated on the lower side.

The petals are of a b ick red, with numerous pustular spots of a lighter color. The whole substance of the flower is not less than half an inch thick, and of a firm, fleshy consistence. It soon after expansion begins to give out a smell of decaying animal matter. The fruit never bursts, but the whole plant gradually rots away, and the seeds mix with the putrid mass. It seems to be a flower unknown to most of the natives, as well as to naturalists; its colors red, yellow and purple, and most brilliant. The chemical composition being fungous, it would not keep; and we had not enough spirit to preserve a whole flower.'"

A draft for one thousand dollars has been received by George P. Burnham, of Boston, from one of his New Orleans correspondents, in payment for a splendid lot of "Cochin China," "Red Shanghai," and "White Shanghai" fowls, sent out by the Crescent City, by Mr. B., from his imported stock. This is getting up the steam to some purpose. Mr. Burnham's sales, for large samples from his imported Chinese fowls, have reached over $4000 since the last November show in Boston—averaging upwards of $20 a week. He has received as high as $50 for a single pair of his "Cochin Chinas."

NOTES ON GRAPE CULTURE.

BY WM. SAUNDERS.

Grapes Outdoors.—These are budding forth quite strong, notwithstanding the past severe winter. In some cases however, where the last year's growth has been luxuriant, and, in consequence not sufficiently ripened and solidified, they are tardy in leafing out. All such branches should be cut close in. Much injury to arbor grapes occurs from allowing too many shoots to grow. Now is the time to guard against this. When they are cut close down in the winter pruning, young shoots will burst out in all directions. Rub off all such except the strongest, leaving no more than one to each eye. This is very important. We have occasionally heard individuals who had not sufficient *nerve* to trim their grapes properly, holding forth about the futility of thwarting nature in her course, by pinching and pruning at the growing plant. They forget that their vines are under artificial treatment, which, to be successful, must be fully carried out. It is a wrong idea, however, to suppose such treatment is opposed to the laws of nature; we only direct her in a course to serve our own ends, and perhaps the best argument that can be brought to bear on this matter is the fact, that those who attend properly to their grape vines, have, in due season, abundance of well ripened fruit; while he who takes for his motto "whatever is, is right," must be content with a limited supply of an unripened and really unpalateable article.

Grapes Under Glass.—In this case we will proceed on the supposition that we are writing for the benefit of amateurs, who, from a desire to secure an interesting and profitable amusement, have commenced the culture of foreign grapes. There has been much said and written on this subject, both by practical and theoretical men, to all of which we are much indebted. We will endeavor from time to time to give the essence of all that is practically useful on the subject. For the present the shoots must be stopped as soon as practicable at one or two leaves beyond the fruit; young luxuriant vines are not benefitted by being pinched too severely, the strong vigorous roots suck in a large quantity of nourishment, requiring a proportionate extent of foliage for its proper elaboration. Be careful to thin out the bunches sufficiently; one bunch is sufficient upon a shoot, and if the plants are fruiting for the first time, five or six bunches each will be as much as they will be able to mature without injury more or less. The heat should never be kept at a uniform temperature; during the day the thermometer may range from 80 to 95 deg., keeping the atmosphere humid by sprinkling water over the floor two or three times during the heat of the day; and a few of the lights should remain open all night. Everything in nature has occasional seasons of excitement and repose, and there is no climate in the world where the temperature is constantly the same.

WINDOW GARDENING--REPOTTING PLANTS.

BY "THEODORE JOHNSON."

DEAR SIR:—I am delighted with your Journal, and will do my best to support it—it was a much wanted work. As you invite contributions from practical gardeners, I will offer you a few leaves from my experience occasionally. In the present, I aim at assisting the amateur and young gardener in the management of their pot plants, while it may give my professional brethren an opportunity of recording how far their practice agrees with or differs from mine. After I had decided to contribute the present article, I felt inclined to abandon it, for in the towns and cities through which I occasionally pass, I see so many well cultivated flowers in numerous windows that I doubted whether their fair cultivators could be taught anything by one of our cloth and cut. However, if my communication does only confirm the pride and increase the interest which these gentle florists take in their window pets, I shall be abundantly rewarded.

Heat, air, and moisture are essential to plants, the roots feed upon them, and in repotting it is necessary to provide for the admission of these to the soil. Too much care can scarcely be given to procuring a proper soil; a soil which is too stiff or loamy becomes so solid that air cannot penetrate it, while it dries very rapidly. A soil too sandy admits air and heat too readily, so that moisture sufficient cannot be retained, while a soil with a superabundance of vegetable matter retains moisture too long and evolves injurious acids. A good soil, then, for plants generally, is that which contains a proportion of loam, leaf mould and sand. Practice only can show the exact proportion of each for the perfect cultivation of each individual species of plant. In that consists the art of cultivation—an oak or a chestnut will glory in the stiffest loam; the seakall, in its native shores, is at home amongst the sand; while the heath must be potted with the finest peaty vegetable matter. Having at hand the soil to be used, and the pots ready, the first thing to be done is to provide for the admission to the roots of its necessary supply of heat, air and moisture; this is accomplished by *drainage*. A quantity of broken pots, bones, charcoal or bricks are in readiness, a hollow tile placed over the hole, and about one-sixth of the pot's depth filled with the broken material. Over this, a thin layer of moss, leaves, or the like, just sufficient to prevent the soil from getting amongst the drainage—otherwise its object is defeated. Few properly estimate the value of air to the roots of plants—roots which have been growing near the surface, or around the edge of the pots, are highly injured in repotting if the plant be placed too deep, or the new pot be so large that the fresh air in the new soil be exhausted before the roots have had time to penetrate through to the sides—hence so many plants die after repotting, and hence the phi-

losophy of the phrase so common amongst gardeners, that the plant died from *overpotting*.

Plants will do as well in the largest size pots as in the smallest, provided attention is paid to the foregoing observations; and plants may be grown to a much larger size thereby, as the frequent checks which plants receive by constant repottings are thereby avoided. Above all things, avoid putting the plant deeper in the new pot than it was in the old. The roots delight in being near the surface; so that they can just keep from the light, they are satisfied. Let any one place a piece of tile eight or ten feet from the stem of a cucumber plant, and in a few weeks they will find a nest of roots under them which they would not have considered possible. The same experiment might be tried with a strawberry, or any other plant. A walk in any old forest is very interesting as showing the love of roots to be near the surface—the whole wood will appear like a map of a thickly inhabited country, all cut up by railroads.

In repotting, if the soil to be used is rather dry, it may be pressed in very firm; if wet, put it in light, and press it when it dries; the plants to be potted should be watered a few hours before the commencement of the operation. My space being already exhausted I must now conclude. I had intended to add to this article a few hints on renovating old worn out specimens. With your permission, I will furnish them at some other time.

MILLBROOK, MAY 25, 1852.

☞ This communication was intended for last month, but retained at the Post Office, although we pay for a box.

On the Management of the Fuchsia.

BY THOMAS MEEHAN.

There are few plants more beautiful when in flower than the Fuchsia. There are none more easily grown by the commonest attention. I have always succeeded well by the following treatment.

If I wish for beautiful specimens of fine symmetry I choose my cuttings from the strongest growing shoots—I prefer the ends. These I take off late in the fall, before the plant is about to rest for the season. The young plants are kept growing all the winter. They are kept in the lightest and warmest part of the greenhouse, and are potted in January; from the three inch pots, they were placed in on rooting, to the five or six inch size. About March the pot will be full of roots, and the plants about 15 or 18 inches high, when, shift again into the ten or twelve inch size. It is from this time that their most critical period of growth commences. The RED SPIDER commences its attacks, which must be kept down—the Fuchsia suffers

greatly from them. I have tried in my time sulphur, Nux Vomica, Hellebore Powder, and other poisons with very little success. My plan, it answers admirably, is to watch closely for the first appearance of the insect, then to remove the plants to the open air, lay them on their side, and give them a powerful syringing. Another essential to success is to give the plants all the light possible, but to *shade them from the sun.* The glass over them should have a thick coat of whitening, or rye flour paste, over it on the inside; or sugar of lead ground in oil, or white paint on the outside.

In the January potting I use a soil composed of nearly half well rotted dung and bar sand, and one half loam—decomposed surface soil of grass land. In the March potting a much poorer soil is employed—the manure being very nearly left out.

In the management of these plants never pinch of their leader. There is no occasion to stop back any of the shoots, as the Fuchsia under the above management will burst from every eye. In the growth of all plants never pinch back a shoot, unless it is absolutely necessary—every shoot shortened tends to weaken the plant. When the flower buds first appear pluck them off; about a month before you wish the plant to flower profusely cease this operation. About May a quantity may be re-potted into fifteen or sixteen inch pots, and the flower buds still kept plucked off for a time—these will make noble plants by the fall. Exoniensis and Beauty of Leeds make splendid objects so treated.

The above treatment of the Fuchsia it will be observed is very different from that which is generally followed in Great Britain, and recommended in English periodicals—but it is the result of my practice in America, and I know will give satisfaction to those who may follow it.

Foreign Agricultural Correspondence.

Model Farm, Glasnevin, Dublin,
May, 1852.

To the Editor of the Florist.

I beg to thank you for the first number of the "Philadelphia Florist," which reached me a few days ago, and which I have just read with very great satisfaction. I assure you that it affords me sincere pleasure to find that you occupy at present a position in which you will be able to disseminate to others a knowledge of *that* science which you yourself have so carefully studied, and with which you are so well acquainted. I am also happy to perceive that you offer the use of the columns of your Journal for the insertion of communications on Agricultural subjects. This, in my opinion, will very much enhance its value, as it will be a very desirable channel through which

to diffuse a knowledge of the most approved systems and practices of husbandry amongst that section of the community whose services are so indispensably necessary for the well-being of their country, but whose daily toil, it is to be regretted, is very frequently expended both unskilfully and unprofitably. The extensive information also, both scientific and practical, which I know you to possess on this proposed department of your labors, will, I should hope, be brought to bear on the agriculture of your *adopted* country. You will thus be able to render your publication what it ought to be—a most valuable acquisition to the farmer as well as to the gardener; and which, I am confident, will in time be duly appreciated.

A lecture of mine, on Agricultural Education, delivered at the commencement of the present session, has just passed through the columns of the Farmers' Gazette. It is contemplated, in reference to it, that it should appear in the form of a small pamphlet for general circulation. Should this be the case I shall forward you a copy of it; and if you consider the matter contained in it worthy of a place in the pages of the Florist, you will be at liberty to give it insertion In the event of a delay in carrying out this arrangement, I shall endeavor to procure the numbers of the Gazette in which it appeared, and transmit them to you.

With best wishes for the success of your journal, I am, dear sir, yours very sincerely, JOHN DONAGHY.

Agriculture--As it is in Britain.

BY F. W. CONNOR.

SIR:—The agriculture of Britain is now settling down in the steady path of progress. High rents have ceased to be the order of the day—protection has vanished—and energy, industry, and economical habits form the distinguishing features in the character of the cultivator of the soil. The more science is brought to bear upon practical knowledge, the more rapidly are the interests of agriculture advanced. In the way of improvements much attention is devoted to the construction of implements for abridging and economising farm labor. Several improved patterns of ploughs and grubbers, suited for different soils and circumstances, have lately made their appearance. Steam power is becoming more generally employed, and it is not a little curious to witness the "tall" chimney gracing the farmtsead. Steam engines of five horse power are in much request, and it is not uncommon to observe the different operations of thrashing, winnowing, sacking and weighing corn; chopping hay and straw into chaff; crushing oil cake, bones, and corn; churning, pumping water, and cutting turnips, going on at the same time. Hussey's reaping machine is likely to prove satisfactory, as a great many orders have

been given to the maker, Crosskill, of Yorkshire. Much attention is devoted to the manufacturing of manure. Independent of new artificial manures daily brought into market, that of the farm-yard is not neglected. The manure heap has become an object of care, being roofed over to throw off the rain. Liquid manure tanks of a circular form are becoming general, as they afford the largest area at the least expense of walls. Metallic or glazed earthen pipes are laid from the tanks to the fields on the farm, the liquid manure being forced through by a pump, and distributed principally over grass land by a gutta percha hose. The management of cattle has been carefully improved. Shed feeding in boxes 8 feet by 12, and never removing the manure until the animal is sent to the butcher, is a plan at present favorably received. A layer of peat mould or vegetable soil is first placed in the bottom of the box to absorb the urine, and layers of cut straw placed over it as required. Manure of good quality is thus made. Others use no straw at all for litter—but house the cattle on boarded floors with wide joinings, to allow the urine to fall through into prepared channels leading to the tank. The solid manure is mixed with water, agitated in the tank, and forced along the pipes to irrigate grass land. The rearing and fatting of cattle is well attended to just now. Cattle of a rapid growth and aptitude to fatten being desirable, it is the farmer's object to procure such feeding stuffs as will best second his ends. Linseed and oil cake are largely employed—the former being steeped in cold water becomes gelatinous, and when mixed with cut hay and straw, turnips, &c. in winter—chaff, cut grass, &c. in summer, forms a nutricious matter for fattening cattle. The manure produced from this kind of feeding will be rich and of primary importance. Think of a farmer in Berwickshire paying £670 last season for manure!

The manufacture of sugar from the beet goes on successfully—the prepared article is equal to the best cane sugar. I use it. Sir R. Kane has completed 167 analyses of beet root in different stages of its growth, with the view of determining the correct value of the plant.

The cultivation of flax is taking place on a more extensive scale this season than heretofore. Many cultivate it for the sake of the seed to fatten cattle—the fibre being but of secondary importance. The want of local markets, and a quick and easy plan of preparing the fibre for market, are difficulties yet to be removed. Claussen's process, although ingenious, has not given entire satisfaction. A government enquiry was appointed to investigate its merits—their report I believe is not yet handed in.

Agricultural education is making rapid progress under the Irish National Board. There are sixty-two model and ordinary agricultural

schools in connection with the Board—exclusive of ninety workhouse schools. When it is considered that from three to sixty acres of land are attached to these schools as *model farms*—and that improved scientific and practical knowledge is made a daily lesson among the ordinary subjects of school instruction, you will readily perceive the value and importance of the machinery at work for "learning the young—and improving the old" in correct methods of Irish husbandry. The same system of agricultural education is going to be introduced into the parochial schools of Scotland. England has done so in many instances.

Altogether the prospects of British agriculture are not on the darkest side, and it is hoped ere long that the legislature will relieve the landed interest of the unequal taxation it is saddled with, exacting at the same time from other species of property its duties—as weel as protecting its rights.

We have endeavored to abridge this report but feared to spoil it; the importance of the subject requires our attention.—The report is from the "*Athenæum*."

KEW GARDENS.

We gave a few weeks back a statement of the public money wants of the different officers of the British Museum. Since then we have received Sir William Hooker's money estimate of his necessities at Kew for the year ending 31st March, 1853. He requires, it appears, 10,929*l.* 16*s.* for the Royal Botanic Gardens at Kew,—1,286*l.* 16*s.* for the Royal Pleasure Gardens at the same place,—and 150*l.* for cases and other fittings—we suppose, for specimens. As Chancellors of the Exchequer and Lords of the Treasury are, however, not accustomed to encourage claims, or Parliament to grant them (we hope), without some fair show of reason, Sir William, on the last day but one of the year, sits by his parlor fire at Kew (perhaps in the very house in which Sir Peter Lely lived), and indites the following able and satisfactory Report.

Royal Gardens, Kew, Dec. 30, 1851.

During the last ten years in which it has been my privilege to prepare a Report on the state and progress of the Royal Gardens at Kew, I have on each occasion been enabled to show a progressive increase in the number of visitors, and have also had the gratification of enumerating the various presents made both to the Gardens and to the Museum.

The past year affords a still more favorable Report. The number of visitors has been 327,000—a progressive increase, in the following ratio:—

1841	9,174	1847	64,282
1842	11,400	1848	91,708
1843	13,492	1849	137,865
1844	16,114	1850	179,627
1845	28,139	1851	327,900
1846	46,573		

This great increase has, no doubt partly arisen from the gracious permission given by Her Majesty, allowing the Pleasure Grounds at Kew to be open to the public daily during the summer months: it may also be attributed to the concourse of persons attracted to London and its neighborhood by the Exhibition. The reports of previous years have, however, proved that, without these adventitious causes of increase, the additional number of visitors may be, in a considerable measure, referred to the popularity of the gardens, and to the opportunity which they afford for instruction.

As these advantages become better known, it may be expected that the number of visitors will steadily augment; and it is an agreeable duty to state, that with this vast concourse of people, of all kinds and grades, including a great number of foreigners, no misconduct or wilful mischief has occurred; while many little irregularities, formerly common, have nearly, if not entirely ceased, though unrestricted access was permitted to every part of the grounds, to all the hothouses, green-houses, and the Museum.

In the Pleasure Grounds an improvement has been effected by the formation of the Sion Vista, with a broad gravel walk, which stretches in a continuous line from the great western door of the Palm Stove to the river, opposite Sion House. This was part of the plan formerly designed for these grounds, which has now been executed, and promises to add to the beauty of the Gardens.

The whole of the woods in these grounds have, during the autumn and present winter, undergone considerable thinning. This should have been done thirty years ago; but I still believe that it will assist the growth of trees which have been until now over crowded, and will eventually improve the Pleasure Grounds.

The open glades have been systematically planted with a great number of young trees, forming an Arboretum, which, if continued, promises to be the most perfect in Europe.

A Lodge has been built at the Pagoda Gate, which will contribute to the public convenience, and afford a residence to the foreman who has the immediate care of these grounds.

The Ha-ha fence, which separates the Pleasure Grounds from the Deer Park, has been completed, and an iron fence is substituted for the wooden paling, which was decayed and unfit for repair.

A small Nursery of about four acres is in active operation for the rearing of trees and shrubs, which may hereafter be transferred as specimens to the other pleasure grounds and parks.

A considerable portion of the Gardens, situated about the Museum and skirting the Richmond Road, was divided into narrow strips by two long unsightly walls, the intermediate piece having been a kitchen garden and paddock in the occupation of his late Majesty the King of Hanover. By the recent demise of that sovereign the ground in question has reverted to the Crown, and Her Majesty the Queen has graciously granted it as an addition to the Botanical Gardens. A portion of it will forthwith be devoted to forming a Medical Garden.

The *Victoria Regia*, blooming almost daily from March till Christmas, has been a great attraction; and it will be reared and seen in much fuller perfection when a house, containing a tank of sufficient magnitude, shall have been built. The plans for this house are now in preparation.

A new Fern House for the cultivation of the ferns of temperate

climates has been added to the plant houses, and two ranges of frames for rearing seeds, &c.

The contents of the several plant houses speak for themselves. The already celebrated, though still young, collection of Rhododendrons, from the Sikkim Himalaya, are promising well, and some showing flower; and the accession of new plants, especially of the useful kinds, is considerable. In the Palm Stove the growth and vigor of the inmates attest the excellence of the structure for cultivation, the foliage of some of the plants already extending to 60 feet from the ground. The palms and tree ferns are among the finest ever reared in Europe. The crowds of visitors to the gallery of this stove have necessitated the erection of a second spiral staircase for their accommodation.

The number of plants distributed by the Royal Gardens this year, as shown by the books, exceeds 3,000: many are of great rarity and value. Among other recipients are the Botanic Gardens of Oxford and Cambridge, the Botanic and Experimental Gardens of Edinburgh, those of Glasgow and Belfast, the College and Glasnevin Gardens of Dublin, many eminent nurserymen, and numerous private gardens. These plants are given on the system of exchange, but when required for purposes of public instruction they are freely bestowed, whenever they can be spared.

To correspondents abroad we have despatched sixteen Wardian cases of useful plants, viz., four to New Zealand, one to Hobart Town, three to Calcutta, two to Madras, one to Trinidad, two to Jamaica, one to Valparaiso, one to Sierra Leone, and one to British Honduras; also various closed packages of roots and seeds to the same and other places. Among them are the seeds of the Victoria, which is now flourishing at Calcutta, in Ceylon and Trinidad. Nowhere, however, has this splendid aquatic succeeded so well (under glass, be it observed) as in the United States, and nowhere has its introduction been so highly prized. The flowers have attained a diameter of 17 inches, and the leaves of 6½ feet. "The excitement," says our Philadelphia correspondent, "caused by the successful culture of the Victoria Water Lily on our side the Atlantic has been extreme, and every one has declared that the glowing accounts of its beauty are not at all exaggerated."

The Museum of Vegetable Products has increased beyond all expectation, and at a most trifling cost to the country; for the advantages it affords in the way of information and instruction are now so obvious, that many contributors who desire to make known various vegetable products and preparations have sent specimens to this Museum, and donations have accumulated, we may say daily, for the last six months. All the available space in the building is now devoted to the Museum, and fitted up with glass cases, which are rapidly filling. For many valuable contributions we are indebted to the Great Exhibition. They consist of vegetable products, raw, and in various stages of manipulation, and manufactures of vegetable substances from all parts of the world. The exhibitors have manifested great interest in the Museum, and have generously aided its collections. The Secretary of State for the Colonies has also placed at our disposal many vegetable products from the distant possessions of the Crown. I have likewise, with the sanction of the Chief Commissioner of Works, purchased an interesting collection (correctly named) of all the Woods of Tuscany from the Tuscan Commissioners; this

country yields much of the valuable timber for our navy. Messrs. Peter Lawson & Sons, of Edinburgh, have presented to the Museum their collection of Scottish agricultural, horticultural, and arboricultural products. This forms in itself an important addition to our stores. The names of contributors stand attached to their respective donations, which need only be inspected to attest the worth and extent of the gifts, and the liberality of the givers. And when the Guide Book to the Museum is printed, which has been necessarily delayed, in consequence of the great recent additions, a yet wider publicity will follow. Such contributions, together with the collections received during this year from Dr. Hooker's Travels in Eastern India and the Himalaya, will more than fill the present structure.

Hitherto we have, in noticing the collections in the Royal Gardens and Museum, pointed chiefly to their public utility, in affording to a large portion of our population the means of inspecting what is most wonderful and beautiful in the vegetable creation. It remains to show that they are no less important to the country in a scientific view. This is evident in the many new plants that have been lately introduced and published, and the numerous discoveries hereby made of those plants which afforded useful products. For example, the African Oak (or Teak, as it is sometimes called), the Gutta Percha Tree, the Rice Paper Plant (so termed) of China, the Chinese Grass, which yields a fibre among the most valuable in commerce ; the Cedron of South America, the Vegetable Ivory, the Coquilla Palm (its nut and fibre both articles of trade,) the Gum Bdellium Tree ; all these afforded important articles of commerce, while they were totally unknown to science ; now they are clearly ascertained and described.

Many able botanists, of our own country and from abroad, frequent the Garden and Museum, also the Herbarium and Library of the Director, for the express purposes of study. M. Treent, of Paris, remained here for several weeks to examine the anatomy and physiology of the Victoria, and to make elaborate drawings of it. The Professor of Botany at the University of New Cambridge, Massachusetts, Dr Asa Gray, who was charged with the publication of the Botany of the United States Exploring Expedition, under Captain Wilkes, and who required to compare that collection with the various herbaria in Europe, spent three-fourths of the time (a year) allotted to that purpose in examining the collection atKew, because it yielded him the largest amount of important information.

Scarcely a day passes in summer, but one or two artists may be seen making drawings for botanical and other works, of such objects as they cannot easily meet with elsewhere.

Her Majesty has graciously given a house on Kew Green as a residence for the Director of the Gardens; and this will enable him to be always on the spot, and to bestow more continual attention than was compatible with a residence at some distance from Kew.

(Signed) W. J. Hooker, Director.

Protect your Fruit Trees from Insects.—Mix powdered sulphur and copperas in equal quantities, and apply it to the roots of apples, pears, peaches, plumbs, or any other kind of trees. First dig away the earth and sprinkle it in from four to sixteen ounces, and replace the dirt.—You may scatter a little in the crotches, or rough bark, to great advantage.

The Crystal Palace.

By all accounts this great achievement of art is doomed. Considerable interest for its preservation has been manifested. British Treasury letters have been written, and committees of inquiry appointed, and reports sent in. We know how indefinite are the conclusions of such committees, how wastefel of public time and patience they are. However, some information has been obtained. Sir Jos. Paxton has written a letter which we subjoin; also the letter of the contractor. Price to the government as it now stands, £65,834, or in round numbers, about $300,000.

"Sir—I have read with surprise the report of the commission appointed by the Treasury to make inquiries on the cost and applicability of the Crystal Palace. The whole bearing of my evidence was in favor of the plan suggested by me, and admitted by the commission to be the best proposed—viz. to convert the Crystal Palace into a winter garden; but the only portion of my evidence which has been adverted to in the report is a detached sentence, the meaning of which has been totally misunderstood. If the opportunity which I requested, and which was afforded to others, of making verbal corrections in my printed evidence had been given to me, I should have made this sentence clearer; but as it stands now, the sense which has been attributed to it arises from a strange misapprehension. I never would have recommended the conversion of the Palace into a winter garden if I had not felt convinced that it was for the public advantage, even in an economical point of view. Though, in my opinion, the cost of a new building on the same scale as the present might be somewhat reduced and its plan considerably improved, the mere expense of adopting what we have got to the purposes of a winter garden bears no reasonable proportion to that of erecting and fitting up an edifice of the kind and size *de novo*. The destruction of the building, when its purchase has been so nearly completed, would, in my opinion, be a wanton sacrifice of property; and the reference in the report to the possibility of constructing a more suitable edifice at a less expense than would be required for the necessary outlay on the Crystal Palace, is not only a misrepresentation of my evidence, but tends to blind the eyes of the public to the foolish piece of modern Vandalism which the report of the commission sanctions.—I have, &c., JOSEPH PAXTON, Devonshire-house, March 23."

"The Government and the Royal Commission have decided to allow the contract under which the Crystal Palace was constructed to take its course. In accordance therewith, the building will shortly be pulled down. We feel that a structure of the kind, novel in design, and which has excited the unqualified admiration of the whole world,

is adapted for many purposes of public instruction and recreation, and ought to be preserved—that the extensive uses to which so large a covered space might be adapted are well illustrated in the evidence of Mr. Cole and Mr. Dilke before the commission on the subject, appointed by the Lords of the Treasury. But, in the report of that commission the objection is taken, founded on a flagrant misconception of Sir Joseph Paxton's evidence, that it would be possible to construct a new building better adapted for a winter garden, at less cost than would be required to render the Crystal Palace permanent, and to adapt it to Sir Joseph's plan. We have no hesitation in saying that this is a monstrous mistake, and that, if the present structure is thrown away, it is simply a wanton destruction of £160,000 worth of public property, which is not likely to be replaced, except under an amount of excitement equal to that which produced the great exhibition. The building can only now be preserved by a manifestation of public opinion in its favor; and that the most ample opportunities for that purpose may be afforded, we shall for the next week throw open the doors to all visitors free of charge. We leave the fate of the building to this final court of appeal, confident that, if our views are sound, they will yet be carried into effect. We are, &c., Fox, Henderson & Co. 3 New-st., March 20."

In accordance with the intimation conveyed in the preceding letter, the public were admitted gratuitously into the interior on Monday, when not less than 30,000 persons—from the peerage downwards—availed themselves of the privilege. The same concourse of visitors has taken place daily during the week; and still further to test public opinion upon the fate of the building, Mr. Oliveira has issued a circular, with the view of forming a committee and holding a public meeting for the purpose. In the meantime, a public meeting is advertised to be held at noon, on Tuesday next, in the Crystal Palace, by permission of the contractors, to take into consideration the report of the recent commission.

The following effusion of feeling by Anna Carmel, is a specimen of the literature of Chester county, written for the West Chester Register:

"A Leaf from My Diary."

How much I love the Sabbath, and such a one as this has been—so calm, so holy, with the sunshine and shadow playing among the bright young leaves, as if angel watchers were there, moving to and fro in cadence with those over whom they were holding vigil. Each tree and shrub is crowned with a coronet of pearls more precious than the gems that deck the mitred ones of earth; and while the busy mul-

titude has found a respite from their toils in sleep, it seems as if Nature had chosen this calm hour, with the bloom of Eden resting upon her, to offer up incense to the Deity—praise and thanksgiving for this gay and happy season.

It is strange that we can live so much in such a little time, for my moods to-day have been as varied as the Hydrangea's bloom; gratitude, perplexity, meditation, joy, grief and resignation have each had their reign in the space of one short day, and thought perplexed still holds the sway; for a friend chanced to ask me this morning, what my idol was, that on earth to which my heart most fondly clung.

I essayed a reply, but the unspoken words fell back upon my heart, like the echo of a departed hope, and I felt alas! there was a blank upon the heart's tablet, a page upon which the recording angel had placed no seal. I searched the casket of unwritten thought for gems the world has never known, and lifted the curtain of reserve, but found no ambushed idol; pencillings were there of birds, and flowers, and books, and friends that wore the smile of love, but not idolatry. I called up pride in goodly apparel, but the indignant frown convinced me it was not there. I searched in vain, until the present whispered turn to the records of the past: I obeyed and the scenes of other days rose up before me; home with its clustering vines, and shrubs, and flowers, the dulcet tones of kindred voices, and the winning smiles of loved familiar faces, revealed what once had been my earthly idol; for surely are not the home affections nearest to those of heaven? And call it not a crime to worship at such a hallowed shrine; a mother's heart is the altar of affection for a child, and a father's heartfelt prayer is the ladder upon which it shall ascend to receive the blessing.

But with all this gush of holy feeling, this living over again of the heart's histories, I could find no answer from without to the echoed words; the polar star of my earthly existence has been stricken from the firmament, and I have nothing around which to rally my affections, they have gone out in the world upon a general mission; a feeling of sadness may arise when a tiny warbler sings no more, when a floweret dies, or a volume is lost, and the bitter tear-drop may fall when friends depart, but there is no more breaking up of the soul's waters, for home, the idol, is destroyed.

Kind reader, ask thyself the question! it is well for all to know their household image; whether it be in a tangible form, or like my own, the spirit records of the past.

5th mo. 16, 1852.

Time consecrates; and what is gray with age becomes religion.

A Voice from Marathon.

[A Suppressed Poem—By Tom Moore, the Irish Poet.]

O for a voice as loud as that of Fame,
To breathe the word—Arise!
From Pindus to Taygetus to proclaim—
Let every Greek arise!

Ye who have hearts to strike a *single* blow,
Hear my despairing cries!
Ye who have hands to immolate *one* foe,
Arise! arise! arise!

From the dim fields of Asphodel beneath,
Upborne by cloudy sighs
Of those who love their country still in death—
Even I—even *I*—arise!

These are not hands for earthly wringing, these!—
Blood should not blind these eyes;
Yet here I stand, untomb'd Miltiades,
Weeping—arise! arise!

Hear ye the groans that heave this burial field?
Old Græcia's saviour-band
Cry from the dust—"Fight on! nor *dare* to yield!
Save *ye* our father-land!

"Blunt with your bosom the barbaric spear!
Break it within your breast;
Then come, brave Greek! and join your brothers here
In our immortal rest!"

Shall modern Datis, swoln with Syrian pride,
Cover the land with slaves!—
Ay—let them *cover* it, both far and wide—
Cover it with their *graves!*

Much has been done—but more remains to do—
Ye have fought long and well!
The trump that, on the Ægean, glory blew,
Seem'd with a storm to swell!

Asia's grim tyrant shuddered at the sound,
He leap'd upon his throne;
Murmur'd his horse-tail'd chieftainry around—
"*Another Marathon!*"

Dodona, 'mid her fanes and forests hoar
Heard it with solemn glee:
And old Parnassus, with a lofty roar,
Told it from sea to sea!

High-bosom'd Greece, thro' her unnumber'd vales,
Broke forth in glorious song!
Her classic streams that plough the headlong dales,
Thunder'd the notes along!

But there's a bloodier wreath to gain, oh friends!
Now rise, or ever fall!
If ye fight now no fiercer than the fiends,
Better not fight at all!

The feverish war-drum mingles with the fife
In dismal symphony,
And Moslem strikes at liberty and life—
For both, strike harder ye!

Hark! how Cithæron with his earthquake voice
Calls to the utmost shores!
While Pluto bars, against the riving noise
His adamantine doors!

Athene, tiptoe on her crumbling dome,
Cries "Youth, ye must be men!"
And Echo shouts within her rocky tomb,
"Greeks, become Greeks again!"

The stone first brought his living tomb to close,
Pausanias' mother piled:
Matrons of Greece will ye do less for foes
Than she did for her child?

Let boyhood strike!—let every rank and age
Do each what each *can* do!
Let him whose arm is mighty as his rage
Strike deep — strike home — strike *through!*

Be wise, be firm, be cautious, yet be bold!
Be brother-true—be One!
I teach but what the Phrygian taught of old—
Divide, and be undone!

Hallow'd in life, in death itself, is he
Who for his country dies;
A light, a star to all futurity—
Arise ye, then! arise!

O countrymen! O countrymen! once more—
By earth—and seas—and skies—
By Heaven—by sacred Hades—I implore!
Arise! arise! arise!

Thorns or Spines are soft in May and June; they grow woody towards winter, and become more dangerous. May Thorns are very striking specimens of Horticulture.

BEER, Dickens says, "when taken in moderation, is wholesome and refreshing—stupifying and to station-house leading, when taken to excess." We are glad to hear him come out on Beer as follows, he takes for his vehicle a Beer dray, and with the Beer deliverer visits the Taps of old London.

"That oblong board, all blue and gold, I have spoken of as visible from my parlor window, has no mystery for me. Plainly, unmistakeably, it says *Beer;* a good tap; fourpence a pot in the pewter; threepence per ditto if sent for in your own jug.

And if you admit (and you will admit, or you are no true Englishman) that beer be good—and, being good, that we should be thankful for it—can you tell me any valid reason why I should not write on the subject of Beer? Seeing how many thousands of reputable persons there are throughout the country who live by the sale of beer, and how many millions drink it, seeing that beer is literally in everybody's mouth, it strikes me that we should not ignore beer taken in its relation towards belles lettres. Tarry with me, then, while I discourse on Beer—on the sellers and the buyers thereof—and of their habitations. I will essay to navigate my little bark down a river of beer, touching, perchance, at some little spirit-creek, or gently meandering through the "back-waters" of neat wines.

When the Spanish student—immortalised by Le Sage—was inducted into the mysteries of the private life of Madrid, he availed himself of a temporary aerial machine, in a person of diabolical extraction, called Asmodeous—who further assisted him in his bird's-eye inspection, by taking the roofs off the houses. When the nobility and gentry frequenting the fashionable circles of the Arabian Nights, were desirous of travelling with extraordinary rapidity, they were sure to be accommodated with magical carpets, or swift-flying eagles, or winged horses. Then they could be rendered invisible, or provided with telescopes. enabling them to see through every obstacle, from stone walls to steel castles; but things are changed, and times are altered now. One can't go from London to Liverpool without buying a railway-ricket, and being importuned to show it half-a-dozen times in the course of the journey. If you want to study character in the Stock Exchange, you can get no more invisible suit to do it in than a suit of invisible green, and run, moreover, the risk of hearing a howl of "201!" and feeling two hundred pair of hands, and two hundred pair feet to match, bonnetting, buffetting, hustling, and kicking you from the high place of Mammon.

The heavy wheels of our chariot have been rumbling, while I spoke, through the great thoroughfare which commences at Charing Cross, and ends at Mile End—somewhere about where there was, once on a time, a Maypole. It diverges, going westward; and we are in a trice in a street, in which I never was in a vehicle in my life without being blocked up, and in which, in the present instance, we are comfortably wedged with a timber-laden waggon, a hearse, and an advertising-van in front, and a Hansom cab or two, a mail-phaeton, and Mr. Ex-Sheriff Pickle's elegant chariot behind. Leaving the respective drivers to exchange compliments, couched in language more or less parliamentary, we will descend for a moment—for the neigh-

borhood is thickly studded with public houses—and we shall have time, ere our chariot be extricated, to investigate numerous varieties of "London on Tap."

One word about the customers, and we will rejoin our chariot, which must surely be extracted by this time. Thieves, beggars, costermongers, hoary-headed old men, stunted, ragged, shock-haired children, blouzy, slatternly women, hulking bricklayers, gaunt, sickly hobbededoys, with long greasy hair. A thrice-told tale. Is it not the same everywhere? The same pipes, dirt howling, maundering, fighting, staggering gin fever. Like plates multiplied by the electro-process—like the printer's "stereo"—like the reporter's "manifold"—you will find duplicates, triplicates of these forlorn beings everywhere. The same woman giving her baby gin; the same haggard, dishevelled woman, trying to coax her drunken husband home; the same mild girl, too timid even to importune her ruffian partner to leave off drinking the week's earnings, who sits meekly in a corner, with two discolored eyes, one freshly blacked—one of a week's standing. The same weary little man, who comes in early, crouches in a corner, and takes standing naps during the day, waking up periodically for "fresh drops." The same red-nosed, ragged object who disgusts you at one moment by the force and fluency of his Billingsgate, and surprises you the next by bursting out in Greek and Latin quotations. The same thin, spectral man who has no money, and with his hands piteously laid one over the other, stands for hours gazing with fishy eyes at the beloved liquor—smelling, thinking of, hopelessly desiring it. And, lastly, the same miserable girl, sixteen in years, and a hundred in misery; with foul, matted hair, and death in her face; with a tattered plaid shawl, and ragged boots, a gin-and-fog voice, and a hopeless eye.

We shall borrow for our readers from time to time a few sentences from this series of Papers in "Household Words."

Reported for the Philadelphia Florist, by the Editor.

New York Horticultural Society.

The first semi-annual exhibition of this newly organised society took place at the Metropolitan Hall, Broadway, on Wednesday last June 10th, and was kept open till Friday night. Much interest and enthusiasm was displayed by the citizens in this much required rational amusement. The room occupied, is not so spacious nor so well adapted for the proper display of tall specimens as our Society's Hall. A few of these only made their debut on this occasion. Finely grown and aged specimens of tropical novelties are not to be found in Gotham; for the rest, there was no dearth of Roses, Verbenas, Calceolarias, Pelargoniums, even the Cacti, where there in rank and file; one old crooked specimen looked demure, he was miscalled *Opuntia senilis;* such old men take ill with being called old. *Opuntia senilis* we do not know. We know *Pilocereus senilis* or old man Cactus, and have seen specimens at Kew, more than 12 feet in height. There was a fine specimen of Dacrydium cupressinum (Cypress formed Dacrydium) from Messrs. T. Hogg & Son, nurserymen, York-

ville. A plant of *Araucaria excelsa* was also exhibited, about 14 feet high, but the top was necessarily bent, the ceiling being low. Some fine Azaleas were there from Mrs. Holbrook, Eighteenth street, Sixth avenue—gardener, David Scott, formerly of our city. A fine specimen of Bonapartea juncea, named in honor of (not Louis the nephew, but the uncle himself) Napoleon Bonaparte—Lucien was more of a naturalist, especially in Ornithology. A name is a name, and the less change the better—we cannot be learning all our lives. A fine specimen of the Butterfly orchid *Oncidium papilio*, and *oncidium flexuosum* also in fine state. A fine collection of our friends the Cacti, from T. Richardson, curious and interesting. The Richardsons at home and abroad have shewn themselves friends to Horticulture. We have seen them exhibit plants before to-day. T. Hogg's plants were novel and select, and excited the amateurs in novelties. In fact a friend of ours brought some of them to this city, although we would have it that our nurserymen are posted up in all Horticultural desiderata.

PREMIUMS OF THE HORTICULTURAL SOCIETY.—We subjoin the list of premiums awarded at the late Exhibition, and have the satisfaction of stating that measures will at once be taken to arrange for the autumn display, which will fully sustain the character of excellence so triumphantly achieved at this first semi-annual exhibition.: *Tribune.*

Plants, Flowers, Boquets, Baskets, &c.

Thomas Hogg & Son, best 6 Hot house Plants	$5 00
Louis Menand, best 6 Greenhouse Plants	5 00
Robert Rennie, 2nd best Greenhouse Plants	3 00
Geo. Gamgee, Gardener to Wm. C. Langley, Esq., best 6 Pelargoniums	5 00
Geo. Gamgee, Gardener to Wm. C. Langley, Esq., 2nd best do	3 00
John W. Wood, best 2 Fancy Pelargoniums	2 00
J. E. Rauch, 2nd best 6 Fuchsias (no first)	5 00
Wm. Chalmers, Gardener to Thos. Richardson, Esq., best 20 Cacti	2 00
Alex. Gordon, Gardener to Edwin Hoyt, Esq., best tall growing Cactus	2 00
John W. Wood, best 6 Verbenas	3 00
Andrew Maythorn, 2nd best Verbenas	2 00
Wm. Davidson, best Seedling Verbena	3 00
J. E. Rauch, 2nd best Seedling Verbena	2 00
Charles More, 3nd best 8 Roses in pots (no first)	3 00
M. Donadi, 2nd best 12 Pansies in pots (no first)	2 00
M. Donadi, best 3 Carnations in pots	2 00
John W. Wood, best 4 Petunias in pots	2 00
John Cranstoun, best display of Cut Flowers	5 00
J. E. Rauch, 2nd best display of Cut Flowers	3 00
John W. Wood, best show of Pansies	1 50
D. Boll, best general display of Roses	5 00
J. B. Lenoir, 2nd best general display of Roses	3 00
Isaac Buchanan, best seedling Rose	2 00
Robert Reid, best pair of Hand Bouquets	3 00
William Wilson, second best Hand Bouquets	2 00
James Angus, best Parlor Bouquets	2 00
William Wilson, second best Parlor Bouquet	1 00
Walter Park, best Basket of Flowers	3 00
John Young, second best Basket of Flowers	2 00
Wm. Chalmers, Gardener to Thomas Richardson, Esq., best display of Cinerarias	3 00

Fruit.

Henry Van Horn, best two pounds of Cherries	2 00
William M. White, best quart of Strawberries	2 00
J. W. Hayes, second best quart of Strawberries	1 00
Wm. M. White, best Seedling Strawberry	2 00
J. Hartman, Gardener to Wm. H. Paine, Esq., second best display of Strawberries, (no first)	2 00
Shepherd Knapp, Esq., six splendid Lemons, grown under glass	1 00
A plate of beautiful Nectarines, grown under glass, from W. C. H. Waddell, Esq., too late for competition.	

Vegetables.

George Saul, Gardener to Shepherd Knapp, Esq., best three bundles of Asparagus	2 00
Wm. Cranstoun, Gardener to Edwin A. Stevens, Esq., best three heads of Cauliflower.	2 00
Julius Hartmann, Gardener to Wm. H. Paine, Esq., best half peck of Potatoes	2 00
Alex. Gordon, Gardener to Edwin Hoyt, Esq., best brace of Cucumbers	2 00
Alex. Gordon, Gardener to Edwin Hoyt, Esq., best twelve stalks of Rhubarb	2 00
Geo. Saul, Gardener to Shepherd Knapp, Esq., best six heads of Lettuce	1 00
Julius Hartmann, Gardener to Wm. H. Paine, Esq., best general display of Vegetables	5 00
Geo. Saul, Gardener to Shepherd Knapp, Esq., five beautiful Cucumbers	1 00

In addition to the above, there were some discretionary premiums awarded. There were also a great many very beautiful things presented for exhibition only, a full list of which will be published by the Society, with the names of those who presented them; but the *Victoria Regia*, the great centre of attraction, from Caleb Cope, Esq, of Philadelphia, must not be here omitted.

Maryland Horticultural Society.

Reported for the Florist.

This young, or like its neighbors, this revived Society, begins to become more than a nominal aid to general Horticulture. There are a few men about Baltimore, who, if they only will, can move it along. Guard against monopoly in awarding your prizes—in selecting your officers, in your kindness to strangers. Let your Society—we would say to the amateurs of Baltimore, and its eminent florists and nurserymen, its well-versed horticulturists—be a fair and free society. Mr. Saunders has reported for us the following:

Officers—President, Dr. Thomas Edmonson, Jr.; Vice Presidents, Henry Snyder, Samuel Sands, S. Feast, Sr., John Feast; Treasurer, Edward Kurtz; Cor. Sec. Wm. Saunders; Rec. Sec. R. F. Pentland.

The Society held their May exhibition on Thursday the 27th. A beautiful and unique display of flowering plants graced the tables, evidencing that the horticultural ability and zeal of Baltimore are of no ordinary character. Many seedlings of a superior character were exhibited. In this respect the amateurs and florists of this city have arrived at great perfection. Seedling Camellias, and roses of unsurpassed excellence are here "born to blush unseen," if we may judge from the modesty of the possessors.

The President of the society furnished several dishes of seedling

strawberries; his "HAERLEM ORANGE" is a fruit possessing desirable qualities; it is of medium size, shape conical, a constant and abundant bearer, and pronounced by competent judges to be superior in flavor; MARYLANDICA, another seedling raised by this gentleman, is also a fruit of merit. A dish of beautiful fruit, seedlings from Hovey's seedling, were much admired; it did not appear, however, that they were superior to that variety, with the exception of ripening eight or ten days earlier.

In the vegetable line, Mrs. Rodiewald contributed fine cauliflower and dwarf beans; superior rhubarb, asparagus, potatoes and mushrooms from Dr. Edmonson; and very large Victoria rhubarb from J. Feast.

The principal attraction was the following plants—Messrs. S. Feast & Sons sent a collection of GERANIUMS, among which were conspicuous plants of Camilla, Rosamund, Elegans, William & Adelaide, Bella and Mustee; a collection of CALCEOLARIAS, well-bloomed; Veronica Andersonii, Crinthojolum aureum, and fine bouquets. Dr. Edmonson contributed a great variety of promising seedling roses; FUCHSIAS, one in the ring, Sir J. Falstaff, Lady of the Lake, Beauty of Salisbury, Sidmonthis and Longiflora; luxuriant *Nepenthes distillatoria;* beautiful flowered *Ixora Coccinea*, and seedling CACTI; VERBENAS, Clotilde, Graciosa, Mad. Clunet, Sunset, Talleyrand & Sir Seymour Blanche. John Feast exhibited a general collection of flowering plants, including *Tremandra verticillata* in fine order, *Rhyncospermum jasminoides*, *Boronia viminea*, *Lillium eximium*, *Leschenaultia splendens*, *Begonia hydrocotylefolia Mitraria coccinea*, *Thibaudia vaccineum*, &c.; fine GERANIUMS and FUCHSIAS, and several handsome bouquets.

Messrs. Pentland, Greenmount Gardens, sent an extensive assortment, beautiful specimens of AMIE VIBERT rose, cut blooms of GEANT DE BATTAILLES Granville, Paul Joseph, Souvenir de la Malmaison, Madam Laffay, Monthly Cabbage, Yellow Tea, and General Stewart, a seedling named DR. EDMONSON, apparantly an acquisition *Cuphea Platycentra*, *Leschenaultia formosa*, *Russellia juncea*, VERBENAS, Reine de jour and Amour, beautiful cut flowers in variety.

From the garden of T. WYNANS, Esq., were fine SPOTTED CALCEOLARIAS, Pelargoniums Blanche, Lyra, Village Belle, Aspasia, ANAIS, BERANGERIA, Lady Clementine, MAGOG, &c., VERBENAS, Reine de jour, Sunset, Madame Gourney, Striped Eclipse, Heroine and Malvina, Cinerarias, Newington beauty, Apollo, Resplendent, Jetty Treffles, Glowworm and Delight.

E. Kurtz, Esq., exhibited a collection of beautiful spotted Calceolarias, splendid Verbenas, Roses, Paul Joseph, Geant de Battailles, Persian Yellow, Lady Stanley, Glory d' Angers, Bernardin de St. Pierre, pink and white moss, Countess Duchatel, Madame Cusine, Devoniensis, Charles Souchet, &c. E. W. Stobie, had fine plants of Lillium eximeum, and seedling Verbenas, one named Agnes seemed worthy further attention.

Mrs. Rodievald, sent a neat display of well bloomed Pelargoniums, Fuchsias, &c., Bouquets in variety.

Jas. Galloway, Clairmount Nursery, contributed a fine bloomed Azalea, variegata, Pelargoniums William and Adelaide, MUSTEE, MOUNT ETNA, Orion, HEBE'S LIP, FORGET ME NOT, Arabella and pyramidal bouquets.

The Florist and Horticultural Journal.

Philadelphia, July, 1852.

Three Months' Experience in American Horticulture.

When, on the sixteenth of March last, (or thereabouts,) we were driven reluctantly from the potting bench and stoke-hole of a Philadelphia amateur—whose extreme love of the new and beautiful surprised and cheered us—to the writing desk of the editor, hitherto held sacred by us, we did not anticipate anything but trouble and difficulty. Either the wild prairie, clothed with Nature's own productions, unseen in many cases hitherto by man in his civilised intelligent state, or at least in that character which forbids him to search deeper than the surface or outskirts—either this was to become our field of operations, or the work on which now we spend our time. The turbulent area of political jargon had been seen on a different soil, only to warn us that here there was no place for us in such a capacity; we knew but few—still fewer knew us. Who is this upstart?—this pretentious abortion? Harder words than these have been used to designate the humble editor of this embryo journal. We thank them for using these specious arguments, they live but an hour. We dreaded the "Jeffries" of Horticulture; they have not treated us any otherwise than as gentlemen, who, placed on a high commanding eminence, should treat the crawler up to their popularity, with silence. The grovelling *underwriters* have had their fling, and we are here, thanks to our friends who have *written* and *paid*, and induced their friends to *write* and *pay*; and we hope for at least nine months more we shall say good morning to the *Hawthorns* and good night to the Knights of our profession. The Philadelphia Florist does its best—it is a laborious machine, a real task to its father and friends; but when the machinery becomes lubricated by a little oil from the mint, not *Cat mint*, (*nepeta cataria*,) it shall move along smoothly from Canada to Florida.

THE CALCEOLARIA.

(SEE PLATE V.)

Its Character and Cultivation.—By the Editor.

One of the fugitive creations in which the kingdom of Flora abounds. How beautiful, various and striking are the forms of Calceolaria, or Lady's Slipper; (Ladies' Pockets our lady amateurs call them, and transfer the former name to the Balsam. Any name will suit us, as we have a good memory and can be accommodating in this

way.) The very aspect of this plant would convey some idea of its evanescent character. There are two sections of the genus—one embraces what are termed shrubby Calceolarias, or those which do not die down after blooming, but renew their shoots every season by shooting out buds from the old stem and branches. These are from *C. rugosa* and *C. integrifolia.*

The shrubby species are not so showy as the Herbaceous; they are generally yellow or dark pink in color; their leaves not so broad or wooly, and more serrated; their flowers smaller in size and different in shape, although still very ornamental and more valuable to many than the more transient though beautiful herbaceous varieties. Hitherto their cultivation has not been much extended, as the seeds after vegetation require minute attention. Our specimen is from a seedling raised by R. Buist, not chosen for any peculiar character or merit, but being a seedling it was without any characteristic appellation. One of our friends admired it, and suggested the name which it bears—Anna Neal. The name is in honor of Mrs. Neal of this city, and her friend Mrs. Anna Hill, of the School of Design—a lady who has taken a great interest in the success of the "Florist." Mr. Buist kindly permitted us to name it as above. The drawing is true, and we hope will please the fastidious, as far as they make up their minds to be pleased. This is a small sketch; Mr. Saunders has promised a history of this interesting tribe next month.

New Plant.—At the Stated Meeting of the Pennsylvania Horticultural Society of the 19th ult., a plant from California was exhibited by Wm. Hobson, raised by him from California seed obtained from a friend. It flourished and at length flowered in May, and was deposited on your table to be determined, on the last evening of meeting. If the Botanical Committee have not already described and determined it, I beg to offer the following suggestions as to its identity. It appears at first sight to resemble Echium, a genus of Borragineæ or *rough Plants* which are furnished with a circinate inflorescence. But although having a circinate inflorescence it does not agree in other important characteristics. We then refer it to Hydrophyllaceæ, a natural order also furnished with a circinate inflorescence and not to detain the unscientific part of the audience state my idea that the plant is a new form of Phacelia, at least new to all our friends who have examined it. The grower put the specimen in my hands to name. I therefore, subject of course to revision of Professional Botanists, of whom I am not one, would call it *Phacelia setosa?* bristly Phacelia, or Caterpillar Plant.—R. R. Scott.

To the Pennsylvania Horticultural Society—Stated Meeting June 15th, 1852.

☞ Our spirited friend at New York, of the American Gardener's Chronicle we do not pretend to notice. The handle to our name is just sufficient to lift us by, and no more. If more is required he can have it at the shortest notice—with deeds given under *hand* and *seal* to substantiate all *pretensions*. We would say a word for our talented cotemporary the "Working Farmer." Prof. Mapes we know will not see, or if he do, will not notice such miserable cavil as is vented about "Wren houses." We hope that at some future day, science will have more gentlemanly advocates than the Empire city now possesses. Oh, mantle of Linnæus and Knight where hast thou descended! We recommend the "Working Farmer" as a tried, scientific and practical sheet—not a whit too *chemical*, though the "Plough" thinks it cannot turn up the furrow, loaded with salt and soot, and gypsum, and guano. We shall see when the husbandman comes round to gather the crop, where it is heavy, and where light.

☞ One of the speakers at the Horticultural Exhibition at New York eulogised our friends across the ferry in the following words:— It is conceded that notwithstanding the sterility of their soil and severity of climate, Scotch gardeners are more talented in their profession than any others.

☞ The correspondent who enquired last month about Stowell Corn, knew more about it than we did. We would thank such men to help us with their knowledge.

☞ Thomas Hutchinson, who left this city two weeks ago as collector of native plants and seeds, has written a journal of his tour to Cincinnati. We shall copy from it copiously next month. He publicly returnts hanks to Messrs. Cunningham, of Pittsburg—Mr. Robinson, Sharpsburg—Mr. G. MacHattie, at C. F. Spangs, Pittsburg,—and to Mr. Pentland, Cincinnati, Gardener to N. Longworth, for their kind attention towards him.

☞ We must hold over a paper on the cultivation of the Strawberry—and Mr. Powell's article on Foreign Grapes; also, Thomas Hutchinson's conclusion of the paper on Pruning—with many other important matters.

☞ J. C. Haight, of 5th Avenue, 15th Street, New York, Gardener, F. Norton, has in his pretty conservatory, fine plants of Doryanthes exelsa in bud, also, *Yucca aloeifolia* a fine collection of *Acacias* Araucaria excelsa, &c.

☞ The state of the thermometer is left out, and a Botanical tour in New York, New Jersey, and Chester county, Pa., with the continuation of the article on Acclimatisation of Plants. Also, notices of public and private gardens in the vicinity of New York.

Our Monthly Tour of Inspection.

DR. J. RUSH, has collected into his fine conservatories, those choice and rare specimens which we do not meet with on this continent or in any other Gardening Establishments. A visit here quite refreshes us, brings to our recollection old friends, whom we used to supply with water, and heat, and admit a little air at times, when we had leisure to open the sashes—plants want air, without it they become mere abortions, descending in the scale of organized beings to anomalies of vegetation. Here we have finely finished houses, constructed so finely, as to give an idea of some extensive museum or Palace Conservatory; do not those dense sashes hinder the light? pardon the liberty—we have here the SUGAR CANE, COFFEE-TREE MAHOGANY, TEA, NUTMEG, MUSK-TREE, (*Aster argophyllus*) Golden Fern, (*Gymnogramma chrysantha*) Kennedias, Palms, large Fuchsias; Cinerarias, Camellias, Rhododendrons, Azaleas, Heaths, Gloxinias, Cacti, Musas, Pine Apple Plants, (Ananassa ananas). We cannot pretend to enumerate a tithe of the novelties collected here, and notwithstanding, the talk which the cavillers at Gotham, may indulge in, Mrs. Dr. Rush is known as a liberal supporter of the arts and sciences. We are sorry we cannot say more for the sake of her quiet and obliging gardener, but our space this month is limited, so we must proceed to

HAMILTON VILLAGE—where once flourished a Horticultural Society. It still holds its meetings with doors closed to such annoying visitors as practical gardeners; however, there are many rare plants in this neighborhood, which we shall proceed to enumerate:

J. F. KNORR, imports the novelties of France and England in the way of Roses, Chrysanthemums, Verbenas, stove and green-house plants, Camellias, Dahlias, Carnation, and everything in fact, new and rare, Ipomæ Limbiata, I. ficifolia, Passiflora diversifolia, new and distinct, Medinilla Magnifica, M. speciosa nat. ord. Melastomaceæ, beautiful hot-house plants, with fleshy dark green leaves, and large spikes or *thyrses* of flowers terminal on the branches; of Medinillas there are three distinct species, M. erythrophylla, M. *speciosa* and M. *Magnifica*, they are allied to Pleroma, Osbeckia, Rhexia, Melastoma, &c., which last is the type of the order MELASTOMACEÆ—we must close here for the present, although we have never noticed AGNOSTUS sinuatus (*Stenocarpus Cunninghamii*,) a fine New Hollander, nat. ord. PROTEACEÆ or BANK'S Tribe—we shall visit with J. F. K's. permission, his vegetable garden again, to see how it goes along.—The weather is too warm to walk much, and we cannot afford to ride, so we must poke about the *Rus-in-Urbe* establishment against our will.—The Committee of Inspection of gardens will soon be about; two members have declined acting, the president W. D. Brinckle, has filled up the vacancies of Capt. Marston and R. Robinson Scott.

On the Bleeding of Trees from Pruning

Mr. Editor—I hoped I had done with you for a time. I have no idea of setting myself up for a "teacher amongst my brethren." I have had to learn much since my advent in this land; I have had much to unlearn, and I am not ashamed to avow that I expect to learn much more, notwithstanding that a friend has thought fit, in another quarter, to give me a poke on the novelty of my knowledge, when compared with his own. I am more happy in reading the experience and ideas of others than in publishing my own. When I give you any ideas of my own, I look upon that act as one of justice in exchange for what I get from others through the same source. When I wrote you my congratulatory paper on the appearance of the Florist, I incidentally stated that *bleeding* did not injure a grape vine. How cold must have run the blood of my censorious friend when his wondering eyes first caught sight of the presumptuous sentence! How his nerves must have shuddered with galvanic twitches, when his keen understanding really began to comprehend the mysterious import of the audacious words! Rank, awful heresy—burn, yes, away with the atheist!

But, to come more to the point, I scarcely believe that I shall be doing myself credit in noticing such an attack from one who could fasten on you for observing that the first greenhouses in the Union were erected in Philadelphia, because some were in existence "in Pearl street seventy years ago," in spite of a fact mentioned in a work which ought certainly to be read at least by *an Editor*—why, the very owner of those houses was probably dead before the seventy years alluded to. However, as there may be some others who still hold to the orthodox view, I will point out why I stated that the grape vine is not injured by bleeding. To be honest, I will state that the idea is not my own; I first read it some years ago in an agricultural journal. Like all new ideas I meet with, "I laid it by" till circumstances should enable me to test it myself.

Sir, "once upon a time" I set two men to "prune up" a stock of silver maples. The leaves had but lately fallen. After pruning for a time, I was informed that the trees bled a little; I thought fit to have the operation stopped. In the middle of winter, when I thought the wood would certainly be ripe, I had a considerable more pruned—these *bled* much; I mentioned the fact to an older and wiser head than mine. His reply was "Oh, it won't hurt them any, they bleed any time." Through pressure of work, some of these maples were left unpruned till the leaves were nearly bursting; then they did bleed—here was a glorious opportunity to observe the effects of bleeding. I watched them frequently after, but I never saw the *slightest* difference in their appearance or health; I pursued the subject further. On tak-

ing charge of an establishment I found a trellis covered with unpruned Isabella vines; it was in the middle of April, and the eyes were bursting. They looked so untidy that I determined to prune them, bleed or not; I did not so firmly believe in the injurious effects of bleeding then as I had formerly done—I resolved to decide it then, and forever. I pruned half the trellis of vines, and let them bleed as they might; the other half I left unpruned, but made them look as tidy as I could. They proved equal ultimately in all respects; the pruning had not injured them—the only advantage gained was the improved appearance I desired. Well, sir, I had gained my point. I had proved that bleeding was not injurious. I next endeavored to understand why it was not so, and I found ample reason; I watched the process of bleeding, and found that it ceased *immediately* on the opening of the blossoms; on examining the wood I found that the *flow* seemed to proceed through the pores of the wood, rather than through the bark or the alburnum; and upon collecting some of the fluid, I found both in the vine and the maple that it tasted *nearly* like water, quite *different* from the taste of the alburnum or inner bark. I watched also the growth of the maple further—I found that in trees of the same age, growing side by side, those bled most which had blossom buds, and that the bleeding *ceased on the expansion* of these buds—those which had no blossom buds were irregular in the time when their ceasing to bleed arrived.

From these facts I concluded that the moisture given out in bleeding was very raw, crude sap, kept in readiness by the plant to supply the great extra evaporation which must naturally take place on the bursting of the buds. It seemed, firstly, that some source to supply the sudden evaporation was necessary; secondly, the flavor of the sap showed that it could be of very little service, except to supply that evaporation, as, had it been ever elaborated in the leaves, it would have tasted like the inner bark; and thirdly, the experiment on the grape and the maple proved, by their being uninjured, that the buds left on the trees after pruning did obtain from the stock that was left, sufficient for all their evaporating purposes.

In conclusion, I beg to assure my friend that I write these remarks in a good spirit, for what I believe to be a physiological truth. It will be the last time, however, that I shall notice the closeted cavilings of any one. What I write is from my own observation and experience. If these are different from those of my friends, it will be a pleasure for me to know it through the "Florist," and study their point. A Pharisaical prayer for our "practical" improvement in the profession will not prove or disprove any one fact. Let us have better arguments than these.

Thos. Meehan.

CALENDAR OF OPERATIONS,

Written by Practical Gardeners, for the Philadelphia Florist,

Hints for July—The Flower and Vegetable Garden.—It is customary for writers to apologize for imperfections which may be found in their productions. In arranging a calendar of operations it is impossible to lay down rules infallible in their application to circumstances so varied as those which surround each operator. It will therefore be our endeavor to give rather the principles upon which our practice is founded, when the judgment of most readers will lead to their correct application.

Hot-House or Stove.—Plants in this department are very liable to get scorched by the sun in our endeavors to keep the house close, in order to preserve its humidity. The glass should be painted with white paint on the outside—it will last two seasons; no evil will arise to the plants in the winter time by the slight obstruction of light.—Air should only be given at the top sashes when the thermometer rises above 95°, and the house should be syringed, and water thrown on the paths before airing, or so much moisture will escape with the heated air as to check the growth. If the plants are likely to become *drawn*, water them only when they are quite dry. Acanthaceous, plants as Justicias, Ruellia, Geissomeria, Aphelandra, &c., as well as other fall and winter blooming plants will have to receive their last potting now. *Cestrum aurantiacum* is a beautiful fall blooming plant.

Greenhouse.—*Erica*, *Epacris*, *Correa*, and other fibrous rooted plants will do better kept in the greenhouse all summer, provided the glass be painted to exclude the burning rays of the sun; the top sashes should be thrown open a considerable distance, and left open during the summer, except before the commencement of heavy rains. Hard-wooded plants can be "*grown* in America" only by being kept under glass—the out-door atmosphere is too arid, and the heavy rains swamp them. Chinese Primroses ought to be sown now; no greenhouse ought to be without their blossoms in March and April. Soft-wooded plants are better out of the house now; they should not however be exposed to the full sun—the leaves of all plants grown under glass are more or less injured by full exposure to the sun. Cultivators are divided in their opinions respecting the propriety of turning out Camelias in Summer; where they are to be turned out they will do best under the deepest shade—those kept under glass will require occasional heavy syringings, to keep down spiders, and insects generally.

Rhyncospermum jasminoides is a good new climbing plant for the greenhouse; color, white, fragrant.

Flower Garden.—The grass should be kept frequently mown—

the coarser kinds are destroyed by this time, while the finer kinds grow closer and make a more velvety surface. Flower beds will require frequent stirring of the surface soil, in order both to keep down the weeds and to render it cool; where the flowers are grown in masses they should be frequently pegged down—it shades, as well as sooner fills the beds. Now is the season to observe what kinds of plants are best adapted to bedding out purposes, so that cuttings may be procured in time for next season's plants. All the various kinds of PETUNIAS are excellent, they endure any amount of drought or heat, and are very showy. The SENECIO JACOBÆA, or *s. elegans*, makes a good crimson; *Gaillardia picta*, French Marigold; *Cuphea platycentra*, SCARLET and PINK GERANIUMS, all make fine bedding-out plants. VERBENAS and HELIOTROPES are more nice in their soil, they often fail.—Roses may now be budded, but wherever practicable they should be propagated from cuttings or layers—budded plants often die, and generally sucker much.

VEGETABLE GARDEN.—In the early part of the month another crop of DWARF BEANS may be put in; they will come in most useful before winter; the early six weeks is the best for this crop. If the ground has been trenched deeply, sow also another crop of BANKSIAN MARROW PEAS; SAVORY, CAPE BROCCOLI, and DRUMHEAD CABBAGE, ought also to be put out at once; KOHL RABI does best in rich stony loam. Those who can protect the LARGE SULPHUR BROCCOLI in winter, ought to plant out now in deep, rich soil—they will head the February following. ENDIVE, in many places, has become essential; towards the end of the month sow for the main crop. We have given up growing the BATAVIAN, the CURLED being always preferred. Towards the end of the month, sow a few RUTA BAGAS, (Skirving's improved Swede,) and prepare for the main crop—ground sloping to the North produces the best crops. In all cases keep down weeds; never suffer one to flower, much less seed—I would rather be a week behind with a crop than allow a weed to get ahead. T. J.

Pennsylvania Horticultural Society.

The sixth stated meeting of the Society for 1852, was held on Tuesday evening at the Society's Hall, Chinese Museum, W. D. Brinckle, M. D., V. P. presided, (at last stated meeting P. A. Keyser presided, not Dr. B., as we had it. We wonder where our President is?) The display was not so extensive as we had anticipated, either in fruits or flowers. Jas. Bisset, Sr. exhibited cherries, for which a prize was awarded; Mr. J. S. Lovering's gardener, Mr. Miller, exhibited flowers and fruit, consisting of several varieties of choice strawberries, which excited the Epicurean dispositions of who?—every one who saw them

—they were considerately left on the table after the exhibition as an exciter; but alas! they were eventually closeted. All the fruit was not borne away *Scott* free. Mr. B.'s cherries were reduced considerably; almost every one tasted Gerhard Schmitz's fine Pennsylvania seedling strawberry. Old Gerhard is a great one to raise seedlings of pears, dahlias, peaches, strawberry, and he makes, we believe, chocolate too.

R. Buist's foreman, Wm. McIntosh, exhibited plants as follows:

Ixora coccinea, Angelonia grandiflora, Rhynchospermum jasminoides, Gesneria lutea, Gloxinia rubra, Rondeletia speciosa, Sollya heterophylla, Petunias elegans and eclipse. Fuchsias, M. Chauvierii, Dr. Adam Clark. Fancy Geraniums—Ytolmskii, Clown, Jenny Lind, Mad. Miellez, Spleanii, Ogre.

C. Cope's gardener exhibited the following plants: Begonia sanguinea, Brugmansia Knightii, Oncidium luridum, Gongora maculata. —Fuchsias—Gay Lad, Corallina, Snow Drop, Napoleon, Beauty of Leeds, Exoniensis, Princess Alice. Verbenas—Hovey's America, Diadem, Republican, Nectar Cup, Orb of Day, and three Pelargoniums.

We shall look anxiously for the return of Mr. Buist, with the plant novelties of Paris and London, he set out on his important journey on last Saturday, in the "Arctic" in good spirits—we hope we will be borne out in our statements, that Philadelphia is not behind the time in Horticulture, although we saw some fine new plants at Hogg & Co. New York. Mr. Burnett exhibited plants we believe, but he left us no list. The premium was awarded to F. Lennig's gardener.

Thos. Megrahn, deposited a collection of vegetables, consisting of Peas extra early, Spinach, Lettuce, (*Butter and Large Black*) Radish *long scarlet and turnip rooted*, Parsley, Thyme, Onions *silver skinned.* The designs were numerous and fine; R. Kelvington, deposited a fine basket of flowers.—We have to apologise to Mr. K. for omitting to notice his basket of indigenous plants last month containing some rare natives we have not heretofore reported the proceedings of this society as official, Mr. James, however, has handed us the following awards:

By the Committee on Plants and Flowers—Plants in Pots: For the best and most interesting collection, to Thomas Meehan, gardener to Caleb Cope; for the second best do. to John Pollock, gardener to F. Lennig; for the third best do. to Wm. McIntosh, foreman to R. Buist. Bouquet design, formed of cut flowers—for the best, to John Miller, gardener to Joseph S. Lovering; for the second best do. to Thos. Meehan; for the best bouquet suitable for the hand, to the same; for the best of indigenous flowers, to the same. Basket formed of cut flowers—for the best to Robert Kilvington; for the second best to Thomas Meehan; for the best of indigenous flowers to the same.

The committee awarded a special premium of two dollars to Peter Raabe for a fine display of seedling Verbenas. They notice a number of fine flowers of the Night-Blooming Cereus, from the collection of Caleb Cope; and a new plant, the Phacelia setosa, from Wm. Hobson, grown from seeds collected in California.

By the Committee on Fruits. Strawberries—for the best 2 quarts, the Pennsylvania, to Gerhard Schmitz; for the second best, the Hovey's seedling, to John Miller, gardener to J. S. Lovering. Cherries—for the best 2 quarts, the May Duke, to James Bisset, gardener to James Dundas; for the second best, the May Duke, to Isaac B. Baxter. The committee observe that the display of Strawberries was remarkably fine, and the fruit of great size.

By the Committee on Vegetables. Vegetables—For the best and most interesting by a private gardener, to Thomas Meehan, gardener to Coleb Cope; for the second best do. to Thomas Meghran, gardener to Robert Cornelius.

On motion, the chair appointed delegates to proceed to Washington to represent the Association at the Agricultural Convention to meet there on the 24th. David Landreth, J. Price Wetherill, Dr. Hare, Thos. Hancock, C. B. Rogers, R. Robinson Scott, and Thos. Meehan we believe were the members appointed.

The portrait of the late respected President was executed by Sully at a cost of $100. T. P. JAMES, Rec. Sec.

West Chester Horticultural, Agricultural and Industrial Exhibition.

The June Exhibition took place at Horticultural Hall, on Thursday 17th inst., and was continued on Friday and Saturday. This was rather a miscellaneous affair, possessing more real interest than a mere flower show. The evidences of youthful female industry were there displayed in specimens of needle-work, showing the gradual progress of the needle in the hands of the child, the young girl, and the maid and matron; and more than the matrons of Chester county must have been pleased with these proofs of thrift in the housewives of their district. Agricultural implements were numerous; Pennock's grain drill attracted attention; a fine assortment of ploughs and harrows were deposited. In Horticulture, Paschall Morris and A. Marshall exhibited large collections of plants and vegetables; indigenous plants also occupied a place. Strawberries were in quantities; those of A. L. Felton of Philadelphia, however, took the lead. A full report will appear in the West Chester Register.

☞ A large amount of original and other matter has been left over unavoidably.

Achimenes gloxiniæflora.

From the Collection of Caleb Cope Esq.

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NOTES ON "THE CACTI."

BY AN AMATEUR.

The Cactus is a particularly interesting family of plants. Some of them are well suited for window culture, or for small fancy greenhouses; especially those distinguished as the globe or dwarf kinds, the flowers of which are generally small, although not devoid of interest. The tall CACTACEÆ, on the contrary, number among them many individuals bearing flowers of surpassing beauty, especially the genera CEREUS and EPIPHYLLUM. We will briefly describe the several families, and in the remarks on their culture particularize those more generally cultivated as greenhouse plants.

The genus *Melocactus*, is distinguished by its ribbed form, and the tuft of spines and downy matter at top from which the flowers issue.

Mammillarias are those which are covered with little roundish tubercles, resembling the teats or mammœ of animals. The spines are borne at the top of the mammœ and the flowers between them.

Echinocacti are deeply ribbed, without any appendage at top; the flowers proceed from the edges of the ribs.

ECHINOPSIS is a new genus, being an *Echinoctus* in shape, and a Cereus in the characteristics of its flower.

The genus Cereus is variable in form, with lengthened stems, having from three to ten or fifteen ribs, some strong and erect, attaining a great height; others of a trailing habit. They generally produce very splendid flowers.

EPIPHYLLUM includes flat-stemmed short-jointed sorts, with few spines, and pendant habit; the flowers are irregular in shape, and produced from the ends of each joint. *E. truncatum* is the type of this genus, which numbers but few species; what are usually called Epiphylla, are now

PHYLLOCACTI, which have been classed as the flat stemmed or winged section of the CEREI, the shape of the flowers being identical; but

LINK has arranged them into this new genus, under the appropriate name of Phyllocactus; and to it must we refer the old favorites *speciosus*, *Jenkinsonii*, *Ackermanni*, &c.

OPUNTIAS, or Prickly Pears, *Rhipsalis* and *Pereskia*, are not interesting from their flowers; the latter genus is remarkable for having leaves;* it is chiefly used for grafting weak kinds upon, on account of its very strong woody habit.

Cacti are raised—1. From seed: which are produced in a pulpy fruit, which is edible, generally of a spicy flavor. When this is ripe, which is easily known by its being soft and of a dark red color in most of the species, wash out the seeds by breaking up the pulp in water, and sow immediately. If sown in pots, fill up to within two inches of the top with drainage, then to the rim with a mixture of loam and sand, smooth it evenly, and give a gentle watering; after which sow the seeds thinly, and sprinkle a little sand over them, so that they may not be covered, but merely enough to fill up the interstices between the seeds; cover them with a flat piece of glass, and place the pot in a temperature of about 60 or 70 degrees; water gently when required, so as not to disturb the seeds, and even after they are germinated, the young plants will be easily displaced until the rootlets have taken firm hold of the soil. Great regularity and care is required in retaining a steady moisture in the soil, for if once allowed to get dry the seeds will never germinate afterwards. As they advance give more water, and if the plants are well drained there will be no danger of the earth becoming sour. When they begin to crowd each other, lift the strongest of them carefully and place them in three inch pots, in equal quantities of loam, leaf mould, sand, and charcoal broken fine, the pots in every instance well drained. Let them have a warm, rather humid atmosphere while growing, and a slight shading will be requisite during very bright sunshine; pot the remainder as they advance, and treat the whole as recommended for general culture.

2. From Cuttings: In raising the dwarf species from cuttings, considerable care is requisite to keep them sound. Carefully take off any of the small round heads, and having previously filled a pot about two-thirds full of soil and drainage, lay the cutting on the surface with the cut part to the soil, and place it in a warm part of the greenhouse. On the first appearance of rooting pot them carefully into small pots, and keep them warm and moist. The old plant from which the cutting was taken must be placed on a dry shelf, and carefully watered until the wound is healed.

Tall Cacti are easily increased by cuttings; these can be taken off at any time and of any size. If they are young and very succulent, they will emit roots more freely if laid on a dry shelf for a week or

*The spines are abortive leaves—ED.

ten days to dry up the sap, otherwise they are liable to rot. Spring is the most desirable season for striking cuttings, as the plants will have a good season's growth before them. Large cuttings ought to be planted singly in small pots, and smaller ones about an inch and a half apart in large pots, to allow room for the roots extending. As the season advances give plenty of air, and withhold water gradually toward autumn, and ultimately keep them quite dry. They can be kept over winter in any corner of the greenhouse, provided they are kept entirely dry and free from damp.

MANAGEMENT OF THE CALCEOLARIA.

A principal feature in the management of a greenhouse, and one that requires some forethought and consideration, consists in keeping a regular successional display of flowers throughout the year. So conspicuous an ornamental structure as a greenhouse should never be wanting in interest. The practice of turning the plants out during Summer and leaving the house untenanted, is highly censurable. True, it is a season when flowers are everywhere abundant; but there are many beautiful exotics that are too tender and delicate to withstand the viscissitudes of our hot Summer months unprotected, and require the aid of an artificial temperature to bring out their beauties. Of such is the Calceolaria, whose flowering season is opportune, occuring in April and May, just in season to take the place of winter-flowering plants, and keep the greenhouse lively until Geraniums, Fuchsias and other Summer flowers commence blooming.

The Calceolaria, in its original state, has long been a denizen of our gardens; but only of late years have these beautiful herbaceous hybrids which now decorate the greenhouse been introduced. The old shrubby species have many qualifying properties not possessed by their more refined relations; they continue longer in flower, make no inconsiderable display in a flower bed, are of more robust growth and easier managed than the herbaceous sorts. Much yet remains to be done in combining their respective qualities—the hardiness and free growth of the one with the beautifully diversified rich colors of the other. Considerable improvement has already taken place in this direction.

They seem to luxuriate in a somewhat cool, shady, moist atmosphere; therefore sometime during the month of August sow the seeds; they will thus be enabled to get established during the comparatively cool, congenial fall weather; they will indeed keep growing less or more all winter in the ordinary temperature of a greenhouse, and gain sufficient strength to flower, as already observed, before the hot Summer suns arrive. The seeds are very diminutive, and like other small

seeds, require particular attention from the time they are sown until the young plants take roothold in the soil.

The following I have found a very successful method of vegetating seeds of this character. Prepare a small sized, say a four inch pot, by filling it two-thirds full with drainage and rough siftings of soil, and fill up with a light rich compost, such as a mixture of fibry loam, sand and leaf mould ; press it to a perfectly level surface and sow the seeds. Now, insert this into an eight inch pot, first filling the latter with moss until the rims of the two are level, pack between the two firmly with the same material, and soak it thoroughly with water. By moistening the soil gently in the first place and keeping the moss constantly wet, the inner pot will absorb sufficient moisture to vegetate the seed, and obviate the liability of disturbing the soil by top watering. Evaporation will be further arrested by covering the whole with a flat piece of glass. Light may also be excluded by a sprinkling of sand on the glass. Light may or may not retard germination, but in its exclusion the escape of moisture is in a measure prevented, and the more appropriated germinating degree of dampness secured.

When the young plants commence to grow they require to be transplanted. Unless this be attended to before they crowd each other, many of them will decay. Plant them two inches apart in pots or boxes, prepared the same as for seed ; the soil should be kept regularly moist, but not wet. The front shelf in the greenhouse is perhaps the most suitable situation for them all through their growth, until they show flower ; when sufficiently strong place them singly in three inch pots ; throw a syringe full of water over them occasionally, to keep the surface damp. This, however, is independent of the regular waterings, which must not be neglected. The only evil to be dreaded is the green fly, and they are easily got rid of by filling the house with tobacco smoke once in every two weeks or so. If this pest once get a footing on Calceolarias they are done ; the leaves curl up with the insects inside, no ordinary fumigation can reach them, and the growth of the plant is completely arrested.

From three inch I shift them into seven inch pots, the size they are flowered in ; larger sized plants will be obtained by giving them more pot room, but generally at the expense of bloom. All plants flower most freely and perfectly when the pots are well filled with roots. The reason is plain : So long as the roots find opportunity for increase, extension of growth is favored and the flowering period retarded. On the other hand, cramp the roots and luxuriant growth is checked, and a flowering state induced—a physiological rule, which is, as far as I am aware, without an exception. The soil should be of a very porous character ; partially rotted turves mixed with a third of decomposed manure, having a quantity of small pieces of charcoal in-

corporated with it, and a portion of sand, if the loam is tenaceous, will be found suitable. Air and water must have free and ready passage to and from the roots; when they are in flower, shading must be resorted to, the blooms soon decay under bright sun. Aridity in the atmosphere is equally injurious; therefore keep the house damp by using water freely on the paths, under the stage, and, indeed, all vacant places.

Their management in a general way is most simplified when treated as annuals: save a fresh supply of seeds yearly, and pay no attention to the old plants. They may be kept, and offsets are obtained with facility, but unless with particularly fine varieties, they are not worth the trouble; and even under the best care I am satisfied that a large per centage of them will perish after they cease blooming. It must be remembered, however, that I allude to this locality, as I know from experience that it is not applicable to more northern latitudes. So much for difference of climate. Your contemporary of the "American Gardeners' Chronicle," in a recent number of that paper, informs us in a somewhat officious manner, that if we understand first principles aright, successful practice will follow as a matter of course, without reference to the physical peculiarities of climate we may labor under; and we are led to infer from his remarks, that European gardeners, if properly educated, can practice immediately on their arrival in this country as successfully as they did in the one they left. The reverse of this is a notorious fact. These are sentiments that no unprejudiced foreign gardener, of any experience in this country, will endorse; and I do not hesitate to say that the best informed Horticulturist in Europe, whatever his first impressions of American cultivation might be, would find that he had much to learn, and something to unlearn, before he could attain equal excellence. He would find that one year's direct experience would be of more practical benefit than the accumulated theoretical knowledge of half a century. But I am digressing from the subject.

To propogate Calceolarias by *offshoots*. After they are past flowering, select a shaded situation out of doors, plunge the pots well down in the soil, and fill up among the shoots with leaf mould; if a frame is convenient put it over them, and shade the glass; endeavor to keep the atmosphere humid by frequently sprinkling the plants and soil with water. In due time roots will emit from the shoots; these may then be potted separately and taken into the greenhouse; if shifted as they progress they will make fine specimens by the time they bloom.

Still larger specimens may be obtained by the following treatment: When the plants have ceased flowering, cut down the flower stems, clean out all decayed leaves, select a situation on the north side of a fence, and plunge the pots to their rims. Do not give too much wa-

ter until there is appearance of fresh growth; towards the end of August turn them out of the pots, shake away a portion of the soil and repot in pots the same size they previously occupied. They may then be placed on the front shelf of the greenhouse; keep the light in their immediate vicinity closed for a week or two, until fresh roots are formed; sprinkle water on the leaves occasionally to prevent rapid perspiration, and exhaustion by the roots; shift them progressively as the roots extend, using free open soil; always pay particular attention in having ample drainage. If the manure is left out of the soil used for the last shifting, and manure water applied occasionally as the flowers begin to expand, the plants will assume a more sturdy habit, and produce a larger quantity of better developed flowers.

In gathering seed it is important to save from the best formed flowers; a good form of outline is a quality in beauty of more import than mere color. The following criterion is recognized by florists as approaching to perfection.

The plant should partake as much of a shrubby habit as possible, as they are much easier of cultivation and remain longer in bloom. The flower stems should be short and strong. The individual flower should form a perfect circle, free of indentures on the edge, centres raised so as to form a globe. All ground colors distinct, and the spots or markings clearly and distinctly defined. W. S.

Baltimore, July, 1852.

CAPE HEATH--ERICA.

BY F. N., NEW YORK.

The following observations upon that delicate and showy family of plants the Heath, I offér in the absence of any other communication on the subject. Should you think the article worthy of insertion you can use it, if not I hope some other gardeners will give notes of their experience in Heath culture, which once was the *sine qua non* of horticulture, at least when old MacNab of Edinburgh exhibited his giant specimens of Cavendishii and others clothed to the pot and covered with bloom.

The benches of Chiswick and Regent's Park Horticultural saloons were once crowded with Heath bushes, and what family of plants were so refreshing to the eye, so creditable to their successful cultivators. But in America with its 90° and 100° heat, we fear they shall not become so common or striking. Their cultivation, however, must be attempted and rendered as general as possible. Yet how comes it that these very plants which gardeners say cannot endure our climate are the indigenous inhabitants of the arid atmosphere and dry soil of the cape of Good Hope? It may be that cool-

ed by sea breezes they luxuriate there and enjoy salubrity of climate more physically adapted to their character than is indicated by the scale of degrees on the thermometer. Attend to the peculiarities which make up the character of the climate of the Cape, and you must fall into the method of cultivating these beautiful and desirable plants. All gardeners who ever cultivated Heaths in Europe know that they are impatient of artificial heat, and yet will shrink, shrivel and perish at the slightest touch of frost. They will not suffer an over supply of water for their roots cannot absorb it, and the overcharged vessels rot and decay. Their roots are minutely fibrous and will not suffer to become dry, for although their foliage is small, it is densely crowded on their hard woody branches, and evaporation exhausts the supply of moisture quickly and effectually. The *Erica Australis*, a striking and beautiful shrub adorns the lawns of Ireland in a moist situation and not too much exposed to the sun's rays, but when the thermometer falls to 10° or 8°, the tops of the shoots are nipped and damage materially the appearance of the plant. E. Mediterranean is not so tender; it remains seldom affected by the severest frost common to the climate of that temperate island. In the latitude of London, I have seen the stems of heaths rent up by the severity of the frost. This result of intense cold is not understood by many, it arises from the expansion of the sap in the vessels, which when it attains a certain degree of expansion ruptures the cells no longer able to contain it. These species hardy and indigenous in Great Britain and Ireland are not so here, and the distribution of the genus Erica is quite limited and local. *Erica Mackaii* is found in the west of Ireland, and no where else in that country—nor has its identity with any species found in any other country been clearly shewn. In cultivating Heaths then, care must be taken to prevent their being frozen or saturated with moisture, or heated beyond a certain temperature by artificial heat, not to allow them to flag with drought, or at all events to become perfectly dried in the pot, if such occurs they are "gone coons." The soil generally recommended is Jersey peat, or as we used to call it "peat" before we knew much about Jersey. However, some old gardeners not to "the manner born" amuse themselves by letting us see how they can grow them without *black dirt* as they term it. No art admits of so much latitude being given to stubborn practitioners as Horticulture. We may grow plants in brick dust if we apply the proper special manures, (according to the Transaction of the British Agricultural Society.)—But to do it well, we must do it as those do, who have proved their familiarity with the subject of cultivation. Peat then, and sand is the compost most generally recommended, and this must be compressed closely about the roots, resting of course on efficient drainage by potsherds, with a lit-

tle moss laid over to prevent the mingling of the soil with the escaping water. They should be always well saturated after repotting, and allowed to remain in the potting shed until the water has been absorbed. Much injury arises from the rays of the sun acting on the sides of the pot, and when water is added in this position, the roots become scalded and destroyed. The propagation of the Cape Heath was once considered rather a difficult part of a gardener's duty; many failed totally, others found no peculiar difficulty in the matter. The state of the wood is the most important point, after that, proper shading from the sun and avoiding mildew from damp. Strike the cuttings of ripened wood in a cool airy situation, protected from currents, or frost,—cover them with hand glasses, which should be wiped regularly to prevent the accumulated moisture from damping them. It requires eight or ten months to render them fit for shifting into two inch pots—top them as they grow to make them clothed below. Charcoal is very useful in the compost, as it preserves a beautiful dark foliage and absorbs the gases. I add the names of a few desirable species, capable of bearing our climate if plunged in tan or coal ashes in Summer and kept in a shady place.

E. arborea, S. Europe.
Australis, New Holland.
Mediterranean, S. Europe.
andromedæflora, C. G. Hope.
ampullacea "
Aitonia "
Bowieana "
brunioides "
Cavendishii "
elegans "
hyemalis "
linnœoides "
Massonii, Cape of Good Hope.
odoro-rosea "
princeps "
Irbyana "
Juliana "
tubiflora "
Willmoreana "
Vestita coccinea "
Ventricosa superba "
——— rosea "
——— minor "

The National Agricultural Convention.

Amongst the variety of subjects which we have undertaken to review in this periodical none shall hold a more prominent place than American Agriculture. Although quite satisfied that it is the junior of its sister horticulture, yet it has the right of precedence, as the food raising science. It may suit very well for legislative bodies to charm their constituencies with flowing language about Bureaucratic powers, the result of Patent office reports, and the intended machinery of the new Agricultural code, with its boards of runners, clerks, inspectors, treasurer, secretary, professors, &c., &c. But the farmer drives on his plough, and plants his corn, and reaps his harvest as best he may; hoping better things from "Uncle Sam" some future day, when other claims shall have been satisfied—some monuments have to be erected, and private bills to be passed. The farmer needs

neither, farmers are going on quietly and steadily; just let them jog; they are quiet, peaceable souls, and do not murmur; and the broad lands of North America are beginning to look gay with crops of oats and turnips, and even flax, with its blue flowers and shining seeds. We do not now continually see maize, and rye, and buckwheat; for timothy, and clover, and lucerne sometimes vary the monotony of view. The cotton planters of Tennessee and its neighboring states depend not on exterior aid, they drive on their team of human machinery and reap the profit, and look out for protection to their peculiar interest. The manufacturer of Pennsylvania, competing against foreign cheap labor and an over taxed enslaved manufacturing class, demands protection for his especial interest; but the raiser of truck, and grower of corn and wheat must be content to find his produce admitted duty free into the European markets. Whether the one class of American citizens does not gain as much as the other loses, is a question for tariff politicians. What we have to do with is the advancement of Agricultural science. The adoption of some scheme to give a little more impetus to the introduction of scientific knowledge amongst the Agricultural class of Americans; to shew them that reading farming reports, and giving a little of their consideration to the composition of soils with a view to their amelioration; the taking of some step by those whose influence is acknowledged, to lead their less reflecting neighbors to enquire into the ingredients which compose the material of the different crops cultivated on the farm, the character and uses of the different organic and inorganic manures, or extravagant if it seem, to lead farmers to study a little of Agricultural chemistry would be a beneficial course. We have said it—Heterodox as is the belief that American farmers should ever be benefitted by such an occupation of their time, harshly as it may grate upon the feelings of certain correspondents of a certain Agricultural periodical. Yet we hold to it, and affirm that without some little knowledge of the composition of soils and the relative organic compounds drawn from them from year to year by the cultivated crop, farmers plod on in the dark—do not fulfil their mission—do not exert themselves to establish that reputation for intelligence and sound knowledge in their profession which should be the zealous aim of all who live under a free government and enjoy the blessings of free institutions. And now as to the aid to be expected from the General Government in the education of the farmer, to what does it amount? Nothing, but the recognition of certain influential bodies, and the extension to corporations of certain rights and privileges. To do more would be to legislate for one class exclusively, and why not for the society of wine growers, fleshers, shoemakers, and tailors! It may appear to be due to the great interests

at stake, that since Agriculture is the basis of all national prosperity and happiness, a paternal and fostering care should be lent to it by the guardians of the public good—and that at least some of the funds appropriated to our great public charities should be directed into channels that will enrich the soil itself from which all wants are supplied. Or, should the men whose care it is to aid in any movement likely to produce great practical benefits refuse to attend to those duties because it may not have been specified in their oath of office.

The Convention set on foot by Massachussets or Pennsylvania, and agreed to by most of the other States of the Union, has been productive already of some benefit. It has excited in the minds of those interested a little reflection. It was exceedingly well attended. The Bay State with its twenty-five delegates, furnished a president in the person of Marshall P. Wilder, and we question if a better could have been chosen. It is something to have a good head ; and Mr. Wilder has displayed great anxiety for the advancement of the rural arts and sciences. With the co-operation of some of our Agricultural friends who seem a little impracticable on the subject, the United States Agricultural Society organized on a broad basis, and with no sectional interests to promote, might prove a crowning benefit to American and even to universal Agriculture. What nation can raise such quantities of wheat or maize? What country can produce such timber, cotton, barley—such vegetables, potatoes, cabbage, sweet potatoes, melons, cucumbers, water melons—such fruit, strawberries, cherries, apples, peaches, pears, plums, and grapes both native and foreign? In animals show us where are the horses who can work so hard, endure so much hardship as the mixed breed of horses found in this country? The stock of black cattle begins to improve, sheep to be cared for, and in fact all Agricultural improvements to be considered as matter of interest to the tiller of the free soil of America. We have only to improve the stock of farmers.

NOTES CENSORIAL.

BY BROUGHAM.

MR. EDITOR—As you have undertaken to edit and publish here a Floricultural Monthly, it has seemed fit that we should resolve ourselves into a "committee of theoreticals" to keep an eye on you, and see that everybody and everything have justice done them.

A magazine of Horticulture ought to succeed in this city, where there is so healthy a taste for the beautiful in nature and art, and we hope that the "Florist" will continue for many years with a still increasing circulation. Your part must be first cared for, and judicious-

ness in selection of articles and carefulness in giving the authority of your Magazine to theory and practice, will attract subscribers among the very many who are interested in the culture of flowers and fruits.

Your illustrations so far are excellent, both in the selection of subjects and in the artistic execution. There is a great deal about the natural system of Botany in your numbers. *We* believe that its superiority over the Linnæan system is conceded by most European Botanists; and as it seems most reasonable, the sooner it is adopted the better it will be for the science and its followers.

Do Roses require such an amount of manure as your correspondent recommends at page 6 of the May number?

What Mr. Meehan has to say about the Pennsylvania Horticultural Society is very true. Everyone cannot be pleased; so if practicals and amateurs do not like the monster designs, they must recollect that these please the public, whose numerous 'quarters' contribute so much towards paying premiums.

Mr. Saunders seems to be 'well up' in grape culture; he evidently speaks from careful observation. He, as well as the most experienced gardeners in this neighborhood, thinks that pruning will not hurt when the sap is running. We would like to see that question settled. Let us have good authority for your theories, or abandon them.

We are glad to see you devoting part of your space to the notice of native plants, which are too much neglected by our gardeners, only two competing at the Spring exhibitions of our Society. There seems to be a difference of opinion as to the best authority in our Flora. Dr. Gray's is considered the most complete, but does not satisfy every one. Considering that you call your magazine the "Florist," it has comparatively very little to say of what are called florists' flowers. Give something on the characteristics of Tulips, Carnations, Pansies, Pelargoniums, &c.

We come now to the last number, and as we have 'caught up,' we hope in future to be more particular and inquisitive.

The Statistics of Horticulture, so well begun by your retiring friend "Duns Scotus," you continue with speculations on what have been and what may be introduced to our gardens and houses. It is a pity that the productions of our own continent are not brought directly to our collections, instead of making a voyage to Europe and returning here at high prices, with doubtful chances of their living on the way.

Rafflesia Arnoldi is an immensity; but Victoria need not fear the introduction of her more gigantic rival.

Shanghai fowls are of great benefit in increasing the size of a general collection of poultry.

Window Gardening flourishes here to a great extent. In the houses of the rich and poor in all quarters of the city, are to be seen a fine variety of flowers; these are frequently bought in bloom in the Spring, and rules to enable persons to take proper care of them will be very useful to those of your subscribers who cultivate plants in this way.

The Management of the Fuchsia. Mr. Meehan's plan is not new. It is followed in many gardens here, and we have seen as fine pyramids of bloom as could be desired. The varieties of this favorite flower cultivated in this neighborhood are very numerous; but we have seen nothing better than "Expansion" for a white variety.

British Agriculture. Much of British scientific farming might be introduced to this country with great advantage. Whether the high farming system, including pipe drainage, would pay here, where labor is so dear, we leave with those who are more at home on that subject. Certainly it would be a great advantage to our farmers to read a little more, and especially to attend to the saving and care of manure.—Many a barnyard have we seen in this neighborhood entirely open, where large heaps lay rotting, exposed to sun and rain, which carried away over the adjoining meadows to the run which led from the spring house, a strong solution of the manure.

Sir Wm. Hooker's report is interesting. Would that we would afford Botanic gardens in this country; an endowment equal to the yearly expense of Kew would be sufficient to start a garden here which would soon maintain itself.

The Crystal Palace. You were somewhat late in your notice of the correspondence on this subject. The Palace is taken down and carted away to the Sydenham station.

Beer, is beer. Some beer is good beer, as Gray's, or Rudman's; but unless our friends know how to be moderate, *no* beer is better than any.

So the New York Horticultural Society has had an exhibition, and its seems, a good one. The way to make anything succeed there, is to make it fashionable. Fashion they follow with a perfect rush—whether it consist in going to Grace Church, entertaining Kossuth, or seeing the dancing dogs.

Maryland Horticultural Society. Baltimore exhibits some very good plants. We have had occasion to know something formerly of the love of Horticulture shown by its citizens.

The Calceolaria. The seedling figured is a very pretty one and well shaped; where is the cultivation you speak of in the heading of your paragraph?

Monthly Tour of Inspection. Your tour was a short one, judging from the very slight notice you take of the extensive collection of Dr. James Rush; besides which a great deal of the page is devoted to your

recollections, natural orders, &c. If you wish to show the superiority of our collections, you should mention the rare plants to be seen in them, not those which are in every collection. Also, there does still flourish a Horticultural Society in Hamilton Village, which holds its monthly meetings as usual, and if you don't go to them it is your own fault; we know some practical gardeners who go.

On the Bleeding of Trees from Pruning. As far as theories are sustained by practice, the holders to the old notion that trees should not be pruned after the sap has started, seem to be getting the worst of it. Meanwhile, discussion of any subject properly carried on is good, as tending to mutual improvement and correction.

The Calendar seems to be rather late in its advice in the matter of turning out Camellias, &c. Is it not too soon to bud roses in July?

Penna. Hort. Society. Your report of this exhibition is a full one, with the exception that you have omitted a list of the plants exhibited by the gardener to Frederick Lennig, Esq., in our humble opinion very much the best collection exhibited. However, the committee of course are the best judges; but we think spectacles would be an advantage. Also, the larger number of flowers of the night-blooming Cereus, was exhibited by Mr. Bisset, gardener to James Dundas, Esq. who had six blooms there. Mr. Meehan exhibited one flower of C. grandiflora, and one of C. inermis, which is a rarer species, but not fragrant. The Cacti will have to come out next fall, to show grumblers that a collection can be exhibited worth a bronze medal. To be sure, the fall is an unfortunate season as regards bloom; it would be much better to offer the medal at a stated meeting in the Spring or Summer, when their curious growth and gorgeous bloom can be shown together.

West Chester Hort. Society. This town has, as we have, a good deal of the Quaker element, and the Friends have always shown themselves admirers of nature. The exhibition of needlework by Horticultural Societies we never could understand. Patchwork quilts, containing three thousand four hundred and sixty-nine pieces, sown together by a lady eighty years and nine months old, are more in the way of the Franklin Institute, where we have a dozen or more every fall.

When will that committee of inspection be around? It behoves gardeners and amateurs to keep things trim, for orderly gardens and greenhouses make as good a show as rare plants do. Who the committee are we forget, but we hope they are members who have a knowledge of plants as well as a love of gardening.

We are very glad to hear that Mr. Buist has gone to Europe, and have no doubt that our collections will be gainers thereby; but we really don't see what that has to do with the meeting of the Horticultural Society—do you?

LECTURE ON AGRICULTURAL EDUCATION.

BY JOHN DONAGHY,

Superintendent of the Glasnevin Model Farm, and Teacher of Agriculture to the Commissioners of National Education, Ireland.

GENTLEMEN:—As introductory to the course of lectures which it is my province to deliver during the session which is now commencing, I believe I cannot select a more appropriate subject than the following:—"The importance of agriculture, as one of the great divisions of labor, and the best mode of disseminating a general and correct knowledge of it among those classes of the community who are engaged in its daily operations."

I look upon agriculture as one of the most important of the great divisions of labor, not only because it is a primary source of national wealth, but because upon its operations the existence of civilized society depends. The millions of capital invested in its operations, the number of persons to whom it affords employment, the blessings of health which even its toilsome labors dispense, and, under favorable circumstances, the domestic comfort which it is capable of imparting, give to it an interest which no other business in life can create. Or, in the appropriate language of Professor Hitchcock—"Agriculture is the nursing mother of nations. With its prosperity population multiplies, commerce and manufactures increase, all the industrial pursuits of man flourish, and wealth and comfort abound. On the contrary, let the cultivation of the soil in any nation be neglected, the hum of business will be silenced, the arm of industry paralyzed, and both individual and national happiness destroyed. Or let the earth cease to yield her annual increase—yea, let but one of her accustomed crops be cut off," and "how soon scenes of want, misery, and crime ensue, constraining multitudes to abandon home and country, in search of sustenance in a foreign land, or consigning them, by famine and pestilence, to untimely graves.

"This art is indeed the primitive and most important pursuit of man. On its success depends the welfare not only of one nation, but of the whole civilized world. Its importance can never be appreciated until we arrive at the final results of commerce, and the other great industrial pursuits which rest upon it, nor until we can obtain the aggregate of those blessings which it has conferred, and is capable of conferring, on the human race."*

True, some other avocations may offer greater facilities for the realization of profitable returns from the investment of capital; but if we compare the real and substantial advantages derivable from rural industry with those resulting from any other of the ordinary avocations of life, we shall find that he who devotes himself to the cultivation of the soil, is in the enjoyment of many of those blessings which constitute the elements of happiness to man.

How comes it, then, that an art which holds so prominent a position in the estimation of all, and which is so indispensably necessary for the well-being of mankind, has been so far outstripped, in progressive advancement, by almost every other art?

Many reasons have been assigned by agricultural writers for the slowness of pace which has characterized the progress of agricultural improvement, some of which, I admit, bear forcibly upon the point,

* Report of Commis's. to Massachusets, relative to Agricultural Schools.

but none of them, in my opinion, with so much cogency as that which ascribes it to the absence of an early and efficient agricultural education. Unfortunately, till within the last few years, it was the prevailing opinion that the man whose intellectual capacities unfitted him for the pursuit of almost any other vocation, was considered perfectly competent to become a tiller of the soil. This erroneous view, however, is now gradually giving way before the enlightening influence of more extended knowledge; and we are daily becoming more and more alive to the fact, that perhaps no other profession in life requires for its successful prosecution the application of more accurate observation and diversified talents. So far as I have been able to form an opinion of the matter, I consider that, instead of agriculture, as a profession, being one of the simplest and most easily acquired, it is one of the most difficult; and requires for the proper performance of the various operations connected with it, an amount of practical and scientific knowledge which few, who have been destined to the pursuit of it, have been able to acquire. The justness of this remark becomes perfectly obvious, when we consider how intimately not only the leading principles of agriculture, but also its most minute details, are connected with almost every one of the natural sciences. If this be the case, how could we expect a different result than that which has occurred?

In corroboration of this view of the subject, I would say that, in tracing the history of agriculture from its earliest records up to the present time, we find that in every instance its improvement has been uniformly in proportion to the advancement and development of the other arts and sciences, This, then, furnishes us with unmistakeable proof that these have lent their aid indirectly to the furtherance of a more extensive knowledge of this great art. Are we not, then, to conclude, that their *more direct* application would be still more effectual in developing its resources, and in placing it in that position which it should naturally occupy amongst an enlightened people? But can such a result be expected through the instrumentality of educated minds, combined as in most cases they are with local prejudices? If not, what more judicious course can be pursued than the affording of a suitable agricultural education to those destined for so important a profession? Has not the application of scientific principles to the other arts produced most beneficial consequences in relation to the comforts and conveniences of civilized society? Need I refer you, in confirmation of this, to the discoveries and inventions of Arkwright, Watt, Franklin, and others? It is unnecessary to do so, as all of you must be thus aware of the invaluable services which, through the instrumentality referred to, they have rendered to the human race. May we not, therefore, calculate with equal confidence on a similar result, as regards the proper application of scientific principles to agriculture? If "knowledge is power," the want of it is weakness; and this axiom is as applicable to agriculture as to any other employment. The doors of the temple of science are open to all who desire to enter it, and there is no reason why the farmer, as well as the mechanic or manufacturer, may not pass its portals.*

All of you are cognizant of the fact, that in acquiring a knowledge of almost every other art, a certain course of study, coupled in most instances with a long apprenticeship, is found indispensably necessary for its proper attainment. Why should it be otherwise with the agri-

* Report of Commis's. to Massachusets, relative to Agricultural Schools.

culturist? Is so important a profession as that of the cultivation of the soil to be suffered to lie in abeyance, when the light of more extended knowledge, in reference to the laws which guide its operations, can be both explained and exemplified to the rising generation by the intelligent teacher?

Heretofore the means considered most effectual in disseminating agricultural knowledge consisted, for the most part, in the establishment of agricultural societies, the holding of cattle shows, &c., all of which have been eminently useful. The Highland and Agricultural Society of Scotland, for instance, has placed that country, notwithstanding the many natural disadvantages under which she labors, in the foremost ranks of the nations of the world, as regards this great division of labor. Admitting to the fullest extent the incalculable amount of good which well-managed associations of this kind are capable of effecting, still, however, I am of opinion, that until the minds of the rising generation of farmers be properly expanded by a suitable agricultural education, the influence and usefulness of such associations must be very greatly limited. The opinion of a man, so eminent for his scientific attainments and great philanthropy, as Professor Hitchcock is known to be, should carry much weight with it on a point such as this. I shall, therefore, take the liberty of quoting his views on the subject. He says—"Both in England and Scotland, and indeed in Ireland also, agricultural societies have been an important means of advancing practical farming. Some intelligent gentlemen, whom I met abroad, were even of opinion that these societies were all that is needed, and that schools would be superfluous. But men do not so judge in respect to other departments of knowledge. Societies have long been in active and successful operation in the various physical sciences; but they are not thought to render schools and colleges unnecessary. The societies aid the schools, but the schools must train up men to be efficient members of the societies."

We know that our old farmers are prejudiced in favor of the peculiar modes of cropping and management which characterized the husbandry of their fathers, and that they still cling to them with a tenacity of purpose which it is extremely difficult, if not impossible, to completely overcome. We know, also, that most of their practices are at variance with the well-established principles of modern agriculture; and that by adhering to them, through ignorance, and by transmitting them to their sons, who, in most instances, are as ignorant as themselves, a perpetuation of the evil is continued. How, then, are we to proceed, with the view of removing most effectually, the principal cause—ignorance—which appears to operate so powerfully in retarding improvement? Simply, in my opinion, by affording a suitable agricultural education, in our ordinary schools, to all the youths in attendance who are destined for the tillage of the soil. The information which would be thus afforded, on agricultural matters, would enable those who would receive it to conduct the business of their farms, in after life, in accordance with the most approved practice, to effect judicious improvements in those departments of their labors which admitted of such, and to dispel, by degrees, those erroneous prepossessions, in favor of particular modes of management which have heretofore formed so great a barrier to progressive advancement in the art of culture and in its accompanying

details. Youth is the most favorable time for making impressions; and if these be based upon just and proper principles, time will not *efface* but *strengthen* them. It is my firm conviction that a pupil thus educated will, when he enters upon the busy scene of farming life, either on his own or on another's account, follow out the system recommended when at school; and after he has proved and experienced its superiority above others he will, both by precept and example, endeavor to extend it.

The views of Dr. Anderson, chemist to the Highland and Agricultural Society of Scotland, as contained in a lecture recently delivered by him on agricultural chemistry, are well worthy of notice. He says—when speaking of the progress of Scottish agriculture—

"The means which, at the present time, I look upon as the most important, and best adapted to this end, is the extension and improvement of agricultural education." And again, he says—"What I look to is not school education, but something superadded to it; in fact, to a professional education which shall instruct the young farmer in the principles of his art and their application to practice. The introduction, in short, of a regular and systematic course of study, which every farmer should be made to go through, in order to fit him for the duties of his profession. The necessity for such a systematic course of education has long been admitted, but it is remarkable that in Scotland, where agriculture has been so long in an advanced state, we are more backward in this respect than any other country. In every other European country, the governments have done everything in their power to encourage agricultural education, except in Scotland and England and in the latter division of the empire, private enterprise has done the same. It is only Scotland which is still without regular educational establishments for the instruction of farmers." Still further, he adds—

"Many of my audience are probably aware that a movement has recently been made, by the educational committee of the General Assembly, for introducing a system of instruction in the elements of agriculture into the parish schools. That movement, which has arisen out of the condition of the Highlands, and the absolute necessity for introducing a new system of cultivation in the small crofts there, I look upon as an important step in the right direction; but it does not by any means fulfil all that I desire. It provides merely for the instruction of the peasant cultivators, and must be considered only as a part of any general system of agricultural education," He then goes on to say, that there should be established in Scotland a great agricultural institution, or college, for the professional instruction of those who are to occupy the large farms of the country.*

On the whole, it is evident that Doctor Anderson looks upon the introduction of agricultural education as the principal means by which to advance the agriculture of even the best cultivated country, perhaps, in the world; and why should there be any objections raised to its general introduction into, perhaps, one of the worst?

* North British Agriculturist of 21st January, 1852.

[TO BE CONTINUED.]

English, Irish, and Scotch Gardeners.

Mr. EDITOR:—When I read the information you gave us of the sayings of a New York speechmaker on sectional superiority, I got tickled—I laughed outright. What in the name of Adam should make a gardener from Ireland superior to an Englishman, or one from England superior to a Scotchman, or all or any way "wice wersey." Had that "critter" been caught in Philadelphia, Boston or Baltimore, I calculate that with an Irishman at one leg, a Scotchman at the other, with an English, French, and a Dutchman to see fair play, he would have been dragged through the sweets of the nearest horse pond. Probably the speech was given after dinner, and he may have taken "too much coffee." Thanks be to common sense and good feeling, the absurdity is confined to New York at any rate. Let us hope that as they have made a noble leap lately after the fame of their sister cities in Horticulture, they will also keep in view the good feeling that better prevails in them; and while they seek to encourage the growth of pansies and potatoes, cultivate also that good and glorious feeling of brotherly love, without which all competition is a crime, and all emulation barbarous. CIVITAS MUNDI.

NOTES ON GRAPE CULTURE.

BY WM. SAUNDERS.

Method of Introducing Grapes into Greenhouses. In "Notes on Grape Culture," at page 38, allusion is made to the practice of introducing grapes into greenhouses, "provided arrangements be made for the withdrawal of the vines during the winter season." It consists of a slight wooden frame made to fit close into the upright light in front. The end pieces taper from a point at top, to a breadth of 8 or 10 inches at bottom; board at bottom same width, and furnished with two semi-circular holes for the introduction of the vines. For this arrangement it is necessary that the sashes be hung at top, probably the most convenient method in all cases. It will be seen that each alternate sash only need be thus arranged, as the two plants can be trained one to a rafter on each side. When the vines are to be brought in, the sash is thrown open, the frame set in, and the plants drawn into the holes in the bottom board; the sash is then shut down and may be permanently secured; the unoccupied lights will be found sufficient for ventilating purposes. This system is superior to cutting holes in the wall or taking out a pane of glass, as the whole opening of the sash is clear, and the vines taken out or in without damage of any kind. The best means for the preservation of the canes during winter, is to bind them up closely with straw ropes, and take them up

underneath the eaves of the house. In building greenhouses with the anticipation of introducing grape vines, we have made the 'dust board' at the lower end of the roof sashes five or six inches wider than usual, thus affording complete protection from rains, and (what is also injurious,) bright sun, which is apt to start the growth prematurely in warm clear weather, such as we occasionally experience in the early part of the season.

While on the subject, we will embrace the opportunity of again urging the practice of growing grapes, and covering the otherwise unfurnished roofs of greenhouses in Summer with a luxuriant foliage, were it to serve no other purpose than that of affording a cool and agreeable shade for the plants on the stage. Of late years many rare and beautiful Summer-flowering exotics have been introduced, and it is to be hoped that the time has passed when greenhouses were considered merely as a receptacle of certain plants in Winter, and converted into a lumber room in Summer. We never enter a greenhouse where nothing but empty shelves meet the eye, without a feeling of regret at the "capabilities" thus inconsiderately thrown away. To keep plants under glass in Summer, a moist and shaded atmosphere is necessary; the former condition is attained by a plentiful supply of water on the floor, and the latter by a covering of foliage under the inner surface of the glass; and no plant seems better suited for this purpose than the grape vine.

Much useless matter has been written upon the composition of ingredients for the roots of grapes. We may on some future occasion offer a few practical remarks on this subject, as a guide to beginners in these matters.

CALENDAR OF OPERATIONS,

FOR AUGUST.

Written by Practical Gardeners, for the Philadelphia Florist.

HARDY FRUIT.

Pears.—This fruit, grafted on the quince, is admirably adapted for the small gardens of amateurs; they arrive early at a fruit-bearing state, and need not be planted more than six or seven feet apart, thus admitting a varied assortment in a limited space. Probably the prevailing cause of barrenness in fruit trees is over-luxuriance in growth; and the best auxiliary means at command to check this disposition is Summer pruning. This, however, is no haphazard operation, but must be conducted with attentive care.

"Not work, indeed, that asks robust, tough sinews, bred to toil,
Servile employ; but such as may amuse,
Not tire, demanding rather skill than force."

If the growth of last year is examined, it will be seen that the shoots of the present year's formation proceed from one or two of the terminal buds, all other eyes below being stationary. Now if these young shoots are checked by pinching off their tops, it will cause the lower buds to break into growth and form fruit spurs. Should it happen, as is sometimes the case, that these under buds do not start, but the terminal shoot breaks again and goes on as before, it must be pinched again, which will generally produce the desired effect. Attention should also be given to the ultimate shape of the tree; where space requires filling up, shoots should be encouraged by preventing growth in other directions.

PEACHES.—The strong shoots of these also require cutting back, to keep the heads low and well filled up. Long, bare stems are objectionable in all fruit trees. Whenever we come across any of these, the idea of a broom with the handle stuck in the ground invariably suggests itself. We do not know of any advantage in long-stemmed trees except the questionable one of allowing crops to be cultivated under them. On the other hand, a low, well-balanced tree is more ornamental—a feature that should not be lost sight of even in a fruit tree. More important advantages are the facility of conducting the operations of pruning and gathering the crop; and further, the stem is shaded from the influence of burning sun, a fertile source of disease, and insects are prevented from harboring about the stem and roots.—If a tree is worth head room in the air, it is worth root room also; therefore we never calculate to grow vegetables or anything else under trees. If you want a long-lived, fruitful tree, allow a moderate yearly crop, thin out the fruit if too abundant; it takes very little time, and the time spent will be amply repaid.

STRAWBERRIES.—The best treatment we can recommend at present for this delicious fruit, is to clear them of weeds, and mulch between the rows with short grass, or where it can be obtained, tan bark. A sprinkling of stable manure is as good as either; cover the soil and keep the moisture. Close observers maintain that shading is as beneficial to the soil as manure. Try it. We have much to learn. Experiment is always profitable, whether successful or not. If possessed of a greenhouse, and would like to please yourself and surprise your friends with a dish or two of ripe strawberries next April, lift a few dozen strong plants from the present year's runners and put them in pots; use a strong, loamy soil, with about a fourth part well decayed manure; put one plant into a five inch pot, let the soil be dry, and press it firmly in the pots. Give a good watering, and set them out of the reach of bright sun for a week or ten days until they begin to grow; then let them be fully exposed and duly watered.

RASPBERRIES.—As soon as all the fruit is gathered, cut out the canes

that produced it; also thin out the young shoots to six or eight of the strongest; hoe deeply and keep clear of weeds; bones are a suitable manure for these. They use much phosphate of lime.

Grapes.—Thinning the fruit is an important point too often neglected. The grape is a very free bearer, but if the health and prosperity of the plant for the future, and large, superior, well matured fruit for the present is an object, cut out some of the bunches where too numerous. It is not easy to give a definite rule, so much depends upon the age and vigor of the plant. In a general way, one bunch is sufficient for a shoot, or on strong shoots, two may be allowed. With regard to pruning, pinch the tops out of the shoots five or six leaves beyond the bunch; clear out all laterals and young wood, carefully preserving every well developed leaf. Those shoots that are without fruit may be cut in somewhat closer, unless they are wanted to fill up; in this case they should be tied in and encouraged to extend, by divesting them of all side branches. Towards the end of the month pinch out the extreme point, which will strengthen the lower buds.

Grapes under Glass.—These, if the bunches have been properly thinned, will now be swelling up and advancing toward maturity.—See that they have sufficient water at roots. The atmosphere must also be kept in a suitable hygrometric condition. Let the principal applications of water take place in the morning; we have found this to be the best period in the twenty-four hours for watering plants, although it gave our old notions a severe shock. "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." Keep all useless spray cleaned out, and give every encouragement to old leaves. These strengthen the plant; young ones abstract more than they return.

> "Nor spare the soft and succulent,
> That feeds its giant although barren growth,
> At the expense of neighboring twigs less ostentatious,
> Yet studded thick with hopeful gems."

After the fruit begins to color, discontinue wetting the foliage, as the fruit is apt to get spotted and spoilt in appearance. When you cut a bunch cut at the same time the shoot it was growing on to within four or five buds of the stem. Of course, leading shoots must not be thus pruned back. By this means the buds for next year's crop will swell up full, and gain additional strength. S. B.

THE FLOWER AND VEGETABLE GARDENS.

Hot House, or Stove Plants.—Air, or orchideous plants, are not much cultivated yet, although they repay cultivation, and are easier grown than is often imagined. Many Dendrobiums, Cattleyas, and Oncidiums will do well in the warm and shadiest part of a moist green house. A friend of ours has now in beautiful bloom in his only house

a Cattleya labiata. Where these are grown syringe them twice a day, give abundance of water while growing; see that they have blocks of wood, which produce ærial roots. Renanthera coccinea will do best entirely on wood. The Zygopetalons, Bletia, and Phajius do better in pots of peat and some charcoal. Achimenes must have abundance of water, while growing they can scarcely have too much; reduce the quantity when they begin to bloom—the flowers are larger and finer. A. pedunculata takes less water than the others. Gloxinias, on the other hand, take more water when blooming.

Continue to propagate all desirable plants; now is the very best time; most stove plants strike root readily in road sand which has been washed by rains. A good stock of some plants should be raised, as Euphorbia jacquinœflora, and Poinsettia—they add much to the interest of a stove in winter. Let not the Cactus be forgotten—Epiphyllums, if they have been grown well in the Summer, and now kept rather dry for a month or two, will be gloriously in bloom at Christmas day. Almost all Cactuses delight in having their heads dry and their roots cool and moist. Where they are grown with pans of water under each pot, and water conveyed to them only this way, they do thrive some. Russelia juncea, that has been grown with abundance of moisture, should be kept drier now; it will bloom handsomely in the fall. The same may be said of most fall blooming stove plants. Amongst the new stove plants advertised or for sale by the nurserymen, we note the following as being really desirable:—Balsamina latifolia, B. repens, Begonia, albo-coccinea, B. cinnabariana, B. coccinea, Chirita moonii, Jatropha pandurælflora, Hindsia longiflora, H. violacea, Eranthemum albiflorum, Porphyrocoma lanceolata, Mussœnda macrophylla, Leianthus longiflorus, L. nigrescens.

GREENHOUSE.—Heaths and Epacrises, with other hard-wooded plants, suffer more at this period than at any other in the year—the aridity of our fall atmospheres annoys them. Keep them under glass if possible, with abundance of air, yet shaded from the sun's rays.—The great desideratum in the cultivation of these plants, is moisture in the atmosphere. This can only be under control under glass or cover. Geraniums or Pelargoniums which have done flowering should be put in an airy but shady place out of doors, to ripen their wood; in about two weeks after, the shoots will be sufficiently ripe for propagating—then the plants may be cut down to within two or three inches of their roots, or from where they were cut down the preceding year. Orange trees will require an abundance of water while growing; horn shavings or farrier's hoof parings act magically on them as a top dressing. Towards the end of the month sow Mignionette, Rhodanthe Manglesii, Phlox Drummondii, and other handsome annuals that may be desirable to bloom in Winter. It should be the aim of

the cultivator to watch for the period when plants cease to grow for the season; when any indications appear, water should be given less often, and every other means taken to insure the wood ripening. In plant, as in fruit growing, much of success depends on this. Many plants reputed shy bloomers, bear a better character when this is attended to.

Horticultural structures of all kinds should now be attended to.—Too often plants get materially injured through houses under repair in the fall not being ready. Many new greenhouses are most outrageous in their expense; we have recently seen one erected at a cost of $3,000, which could have been made to grow the same number of plants as well for $700, and as ornamental for $300 more. It is the duty of all interested in horticulture to advocate the union of simplicity with beauty; intricacy of detail unnecessarily obstructs the progress of our art.

Flower Garden.—Those who grow flowers in mass, have doubtless taken the hint thrown out last month to look out amongst their neighbors for desiderata. In addition, Vinca alba makes a fine white bed. V. rosea, pink; Lychnis coronata, orange; Lantana Sellowii, L. lilacina, purple; L. crocea, or L. Mexicana orange. The different varieties of Antirrhinum make splendid effects.

The French fashion of growing flowers in masses, though beautiful in its effects, has been the means of throwing herbaceous plants out of cultivation. This is much to be regretted; few things are more interesting than good border flowers. Where there are no conveniences for growing them at present, suitable localities should be sought out and the form and appearance of the beds determined on, so that on the arrival of the fall operations may commence at once. Herbaceous plants thrive best generally in perpetual shade. The Holly-hock is a beautiful old border flower; we are glad to see a revival of admiration in its favor.

Vegetable Garden.—As soon as the first crops of peas are off the ground, prepare for celery; there is little gained by planting out too early; the end of the month is preferable in the Middle States. The celery likes shade and moisture. To get good plants, dig the trenches for it twelve inches deep, put on three or four inches of hog dung in the trench, then dig again as deep as possible; when it requires watering soap suds are very acceptable. When the early crop of potatoes are off, sow Ruta Bagas; if the ground were well manured for Potatoes, no manure will be necessary; sow in drills. To preserve from the fly, roll gas tar in sand, when it dries crumble it in pills and strew lightly along the drills. Endive should be sown at once in rich loam on a shady border, to be planted out by the end of the month. Indian lettuce is the best to sow for a fall crop; choose rich ground.—

Savoys, and all Winter Cabbage are of course planted; see that they do not suffer from drought—they, like Celery, love soapsuds.—Onions as they ripen, must be taken up and left in the sun a day or so to dry—rope them if there be leisure, they will keep so "any length of time." Tomatoes—preserve the earliest and largest for seed; don't neglect this. Take an early opportunity of getting the Turnep ground ready, and by the end of the month watch some impending shower to put in the seed. The strap-leaved Dutch is the most generally useful. Don't forget the weeds,—rake off the purslane besides hoeing it up.

T. J.

The Florist and Horticultural Journal.

Philadelphia, August, 1852.

Flora is now in her glory. Earth teems with flowers and fruits—and it seems but a day since Winter bade us adieu, dragging himself reluctantly away from the path of Spring. Humanly desponding, all trembled for the crops, which lay patiently waiting for the sun's rays to bring them to maturity. Man is sometimes prone to impatience—to despair of the future. We now cast our eyes upon immense vegetables, borne by the willing soil, respondent to the anxious desires of the arduous cultivator. The operative class begin to hope that prices will fall amidst so much abundance; and so they will. Plenty will crown the industrious efforts of energetic labor, and the next frost will find them prepared to meet the scowling blast. But such results are not independent results of Nature's providence. They are the combined effects of human foresight and toil. The certain consequences of provisions made in accordance with natural laws. And Science has much to do in such matters, no matter how unscientific may be the operators. However independent of the schoolmaster or printer, they have been taught by some agency, though they cannot tell and do not inquire how it came. From the earliest times to the present day, men have been gathering knowledge from observation of the creation around them, and of which they form an important portion. In the study of the philosopher these observations have been classified, important deductions drawn from them, which are denominated theories, and laughed at, at times, by merely practical men who do not deem that theory is rather based on practice than practice on theory. "This under worship of the selfish idol which men call the practical," does more harm than is commonly imagined. The idea of vital force to which cause the little understood phenomena of the flowing of the sap, the germination of the quiet seed when committed to the earth, and many other such occurrences against which we cannot close our

eyes, is merely an idea deduced from the facts themselves. While we would be willing to allow all due weight to what is understood by the word practice, we must not give undue importance to details of operations carried out in ignorance of fundamental laws which govern matter in all its changes. The practical gardener is a mere machine without the light of science; and by this we would imply, not the rigid technical terms unchanged, and supposed to be unchangeable, in use in the *schools*, but a knowledge of at least the accidence of Natural Philosophy, comprising as it does the laws of motion, the influence of matter on matter; the composition of the crust of the globe; the laws of heat and moisture, and a little of vegetable physiology, with its copartners, Botany, Entomology, Zoology. But the working gardener despairs, for he is a man of limited means—limited in leisure, and some might suppose in intellect. Not so, however. Delving in soil, or as we call it, *dirt*, does not imply intellectual incapacity—on the contrary, with a due regard to other conditions, it invigorates the intellect, and although the "*earth worm*" stoops his back, and with prone front pursues his avocation, yet he can re-elevate himself, and be a man again.

Why are there not more American gardeners? Because it would seem to them an occupation unworthy their high intellectual character and elevated ideas of human excellence. Why do we foreigners all the drudgery? This is a question of political as well as moral bearing. I shall leave its solution to more deep thinkers, those who tell us that "almost all our gardeners are Irish or English, with a few Scotch;" or transpose it, Scotch and English, with a few Irish—always put the Irish last, for if you let them at the head they will make a fuss; but here I have placed them in their comparative position.—There are more gardeners from Scotland than from either England or Ireland. We wish there were more natives among us, for the credit of our profession. This article is rather an "omnibus," but we must reach its point. We would desire to establish a better feeling amongst us; to do away with these distinctions of country or section of country, would hide the dark fact from American eyes that we are jealous-minded. Let those re-echo the humiliating fact who seem disposed to perpetuate animosity. We must meet it, if true—deny it, if false. Yes, our gardeners are for the most part foreigners—strangers to our climate; aliens, if you will, to our race. But how can this defect be remedied?—only by making them as much as may be, American citizens and true republicans. Try to forget they are so, when at times the peculiar views characteristic of their trans-Atlantic origin force themselves in, give no more importance to these trifles than is their due—

"Lives there a man with soul so dead,
Who never to himself hath said—
This is my own, my native land!"

Time will modify these distinctions, if that is the wish of the American public. If not, let them continually force it upon foreign gardeners that they are aliens, and then—How?

Ploughing in Green Crops.

It would seem that our agricultural friends connected with the press are as tenacious of old systems as the "old fogies" are of political errors—merely because they are old. The great increase in population in all agricultural and manufacturing countries, demands at the hands of the tiller of the soil the most rigid economy of labor and expense. Therefore, to cultivate a crop at a great cost and return it directly to the soil, is a practice very questionable as regards utility or economy. It lays a double price on each acre thus treated, so that the ensuing crop must be supposed to produce a yield greatly above the average. That such proves always to be the case is by no means certain. A great many considerations arise as to the nature of the soil before the adoption of this treatment—the absence or presence of certain properties, the physical texture of the soil, and many other topics demand consideration before we could with accuracy assert that the green crop, even if clover, had added the accumulated matter to the soil.—There can be no doubt but that to a soil greatly deficient in organic or nitrogenous matter, all other matters requisite to fertility being present and ready to be called into action, the addition of the *one* material—being the one alone wanting—would produce immediate and striking benefit, an extraordinary yield, and altogether surprise and encourage the experimental farmer. But to soils already possessing a portion of organic compounds, some of the inorganic matters being absent, we submit that the result would be totally different. On the whole, the wasteful process of losing one crop to increase another, does not savor much of improved husbandry, and is enumerated by us in the list of systems of which the *bare fallow* is a familiar example—"agricultural old fogyism."

☞ It has been judiciously remarked by the editor of Hovey's Horticultural Magazine, in a review of the Philadelphia Florist, that if our statement is really true, that there is a totally different climate treatment required for exotic plants in the latitude of Philadelphia, from what is customary in Boston or Albany, the appearance of "an organ the exponent of their wants" will be a benefit and is hailed with pleasure. And it has been enquired if it is really true that we

are alone between Albany and New Orleans. That extremely modest chronicle of New York has also a few words on this point. We are far however, from placing Hovey's respectable Magazine in the same category with this reprint of foreign matter and critic of Philadelphia bantlings, which have already overgrown his own child. We shall endeavor to satisfy them on the matter by facts. We stated our local claims, as we expected them to be responded to first, by those who knew us. We never wished to be local or sectional, but would prefer to be for the *whole Union*, rather than for *Philadelphia*, even if less successful. We know there is room for many other Gardening journals, no matter what others think or say to the contrary; and although we have been bearded by a *foreigner* like ourselves, yet we do not despair as long as we are hailed by the American press and people.

Our Monthly Tour of Inspection.

We have visited many gardens since writing our last chapter on this head. We have not space to do justice to them all, since it is demanded of us by our correspondent "Brougham," to be more minute and particular in the lists of plants. Amongst the plants slightly noticed in Dr. Rush's collection, we submit that many were rather uncommon; for instance, Myristica moschata (nutmeg tree;)—even the old *Aster argophyllus*, or musk tree is not very frequently seen in our conservatories; but as we have on hand a full list of the interesting plants of this collection, taken with some labor, we will furnish a few more in our own time.

We visited the grounds of W. Walsh, Esq., Frankford, and were gratified at the appearance of fine crops of early vegetables; we noticed here corn in bloom, or tassel, as it is termed—the tassel, we would inform the uninitiated, is the male flower. This plant, *Zea Mays*, being dicœcious or bisexual, the cob is borne at the base of the female flower. Mr. Shields, the head gardener, was complaining much of a grub or worm that cut off his Ochra plants on their appearance—a sooty-colored grub, with alarming machinery of destruction. We shall give Mr. S. its history at an early date. His crops were creditable in every respect—fine peas, tomatoes, and squashes at this early season were quite refreshing to the view. In the flower garden we were much pleased; Mr. Ross has fine beds of Verbenas, Petunias, Phlox, scarlet Geraniums in all their varieties. We found a fine healthy plant of Dicentra spectabilis in the greenhouse—it might be planted out to advantage in a proper aspect and situation. *Fuchsia arborescens syringæflora* in vigorous health; fine Celery at this time planted out in a fine deep trench, saturated with soapsuds from the

laundry, promised a good crop; this is the way to grow it—we also observed it practised at Girard College by Mr. Jones. The plant of *Araucaria imbricata* here has been quite destroyed, rather we should presume by damp and want of air in attempting to protect it from the extreme frost, than to the severity of the frost itself. In other situations we have found it quite safe; but its exposure here was rather prominent for so severe a Winter. We were pleased to observe things going on so well; but from the taste of the spirited proprietor, the energy of Mr. Shields, and attention of Geo. Ross, his assistant, such results might be expected.

The great collections of overgrown vegetables contributed for some time past to the stated meetings of the Penna. Hort. Society, were from the grounds of R. Cornelius, Esq., and raised by T. Meghran. He is going now pretty deeply into grape culture, as he has a neat span-roofed vinery filled with young and promising plants. A large plantation of Stowell corn promises to furnish us with an opportunity of testing its much boasted character. A trial of Cranberry culture, novel and interesting to the promoters of American Horticulture, has been commenced by Mr. Meghran; the situation chosen we think is a good one, and no pains spared in their treatment. Many fine herbaceous plants are to be met with in the flower borders; but as the place is only progressing towards maturity, we shall wait a more favorable opportunity to notice it.

Proceeding, we made our way to Springbrook, where a splendid flower of the unceasing Victoria Regia was about to be cut. After it had been removed from the parent stem we had a favorable opportunity of examining its peculiar formation; its *dilated peltate stigma*, closely beset with petaloid stamens, is worthy of attention. Our journey afterwards lay through the woods, among the bullfrogs and snakes; and as the natives of the bogs and thickets do not much interest our readers, we must reserve our diary for some future day, when Botany will not be quite so out of place as it seems now to be.

Trenton is a fine town in its neatly designed houses, with well kept grounds attached to many of them. The residence of Chas. L. Pearson is finely situated, and may become a neat and striking place. We did not spend much time here among the gardens, being much interested in a visit to the paper factory of Messrs. Dewey & Kay. We were much gratified by a view of the entire process of paper making, of which we shall speak again.

Belrose, the country seat of H. Farnum, Esq., attracted our notice, beautifully situated on the west bank of the Delaware, below Risdon's landing. There is here a plant house and vinery with span roof; few make now those *lean-to* constructions, so disadvantageous both to the objects destined to inhabit them and the proprietors. In the green-

house we observed many new varieties of Fuchsias of merit, raised from seed obtained at Paris. These were for the most part dark varieties. Many fine light Fuchsias were in bloom—Purity was one of the best. The gardener, Mr. McClean, informed me that he had named one of his seedlings Belrose. It is certainly worthy the distinction. Seedling No. 1 is also worth naming. A neat plant of *Menziesia polifolia rubra* in good health pleased us much; also, *Erica ventricosa superba*, recommended at p. 104 of this number—we hope to see more of its family soon; it was also in good order. A plant of *Dicentra spectabilis* was also observed here; it was rather drawn up, as gardeners term it; we understood from Mr. Farnum that he had bloomed it out doors early in the present season. Its hardy character has been satisfactorily tested; and therefore we may look for the showy Japan Dicentra, or Dielytra or Dutchman's breeks, if you like it better, planted alongside *Pæonia Moutan*, its friend and compatriot. A hurried glance at the grounds satisfied us that new trees and shrubs were not scarce. We noticed with gratification several new Gladioli from Europe, imported by Mr. F.; Madame Blouet and Madame Georgeon were in bloom, the former very rich in color, and quite a novelty—clear carmine, with light streaks on the under lobes of the corolla.—Mad. Georgeon is darker, but was not quite expanded. We should like to have a group of these figured, if Mr. F. would favor us with specimens.

Again we are under the obligation of stating that we looked in at Springbrook, and found an Achimenes gloxiniæflora, which with due permission we brought to the city and present its fac similie to our readers.

PLATE VI.—ACHIMENES GLOXINIÆFLORA,

Gloxinia flowered Achimenes.

Nat. ord. Scrophulariaceæ. Native of South America.

Imported we believe by Mr. Hovey of Boston. The plant from which the drawing was taken which appears with the present number, was cultivated by Thomas Meehan, gardener to Caleb Cope, Esq., Springbrook, Philadelphia; and was exhibited by him at the last Stated Meeting of the Pennsylvania Horticultural Society, on the 20th instant. We have been informed by a friend that it had been previously exhibited by another gentleman; but we have not had the pleasure of seeing it there, therefore we shall not say this is the first plant introduced here. A great many of these rare and beautiful plants have been overlooked at our exhibitions, where rare Horticultural specimens are not more valued than a bunch of beets, nor half so much. The plate was executed by A. Hoffy.

Maryland Horticultural Society.

Reported for the Florist.

On the 17th June this Society held their monthly exhibition. The articles exhibited were in general of superior character. The display of Fuchsias in particular called forth the admiration of visitors. *Cereus grandiflorus* (Night-blooming Cereus,) from the collection of Dr. Edmondson, flowered during the evening, and constituted a centre of attraction. Several seedlings of the same were sent by Mr. J. Feast; these were studded with flower buds of a large size, some of which expanded.

Although the strawberry season was nearly past, Mr. S. Feast sent fair specimens of BLACK PRINCE, IOWA, and HOVEY'S SEEDLING. His 'patch' of the latter has been superior, fully sustaining the high character of this variety. We had the pleasure of seeing a dish of these when in their prime; some of the berries measured seven inches in circumference. Mr. J. Feast exhibited a dish of Rivers' Monthly Raspberry, an average sample of this fruit. Whitesmith Gooseberries from Mr. A. Friend were conspicuous from their enormous size; what they will be when fully matured, is a question we will not speculate upon. Fine black Tartarian Cherries from Mr. Winans. Mr. Mochler also sent fine Morellos, and a seedling seemingly good; Cherry Currants from Mr. Popplein, looked like a bunch of grapes.

Vegetables are coming in; Mr. S. Feast had Beets, Carrots and early Cabbages, the latter superior; Dr. Edmondson Beet, Carrot, and Turneps; Carrots and Beets from Mr. Winans.

Mr. John Feast exhibited as usual a rare collection of flowering plants; among others may be mentioned *Leschenaultia splendens*, *Ruellia formosa*, *Columnea Schiedeana*, *Torenia asiatica*, and *scabra Syphocampylos nitida*, *Zauschneria Californica*, large specimens of the COFFEE TREE, *Eugenia jambosa*, and *Bonapartea juncea;* fine varieties of Carnations, FUCHSIAS and GERANIUMS, &c., and neat bouquets.

S. Feast & Son's had *Pentas carnea*, *Veronica Andersonii*, a fine plant. Varieties of *Phlox Drummondii*, beautiful spotted CALCEOLARIAS, specimens of *Cymbidium latifolia*, (orchid) Prairie roses, Superba, Queen of the Prairies, Baltimore Belle, and Caradori; Carnations, Fuchsias, and cut flowers in variety.

From Dr. Edmondson's collection were very large trained specimens of *Hoya carnosa* and Cereus grandiflorus. A great variety of cut roses, including some fine seedlings, flowering plants of *Ixora coccinea* and *Combretum purpureum*. A collection of healthy Calceolarias. FUCHSIAS, many new and rare, as NYMPH, ACTAEON, MADAME SONTAG, LORD NELSON, CHATEAUBRIAND, PURITY, BEAUTY OF SALISBURY, DR. JEPHSON, WHITE PERFECTION, CLEOPATRA, DELICATA, ACANTHA, ONE IN THE RING, ELIZA MEILLEZ and MRS. MILLBANK.

Messrs. Pentland & Bro. Greenmount Gardens, sent a rich display of cut Verbenas, including many superior seedlings raised from their select stock; thirty varieties of Roses, too numerous to detail. *Gardenia radicans*, the loadstone of the olfactory nerves; Hoya carnosa, pyramidal and hand bouquets.

Mr. O. Kemp, gardener to Miss Tiffany, sent a collection of well-grown Fuchsias; we noted Epsii, Recurva, Hero, Dr. Jephson, Flavescens, Conqueror, Magnifica, Gay Lad, &c.; also, an extensive variety of seedling Petunias and Verbenas, many of them novelties worthy of attention, notwithstanding the many excellent kinds already in existence. Mr. Winans sent collections of new varieties of Fuchsias and Geraniums, well-bloomed specimens.

The following named gentlemen were appointed delegates to the Pomological Congress, to be held in Philadelphia 13th of Sept. 1852: S. Feast, Sr., E. Kurtz, Wm. Corse, Wm. C. Wilson, Nich. Popplien.

W. Saunders, Cor. Sec.

THE CHESTER CO. HORTICULTURAL SOCIETY

Held its exhibition for July on Saturday last. The day was unfavorable. Messrs. Morris & Co. exhibited greenhouse plants, and obtained the first premium. A. Marshall & Co. also had a fine display. Cut flowers were exhibited by J. M. Bennett and obtained a prize; and from Morris & Co. a design for centre table. The late period at which we received the report, renders it impossible to make it as full as we would desire.

Pennsylvania Horticultural Society.

The seventh stated meeting for 1852, was held at the Lower Saloon, Chinese Museum, on Tuesday, July 20th. The display of vegetables was unusually fine with a fair proportion of fruits. Plants and flowers were extensive in assortment, with many well cultivated specimens. General Patterson favored the society with his presence and permitted his gardener, Isaac Collins to deposit a collection of plants; but no list being furnished us, we cannot enumerate them. We noticed the old and well known *Combretum*, *Hydrangea*, *Fuchsias*, *Torenia*. *&c.*, *&c.*—1st premium awarded. Jas. Bisset, Jr., gardener to Jas. Dundas, Esq., deposited a fine collection consisting of some fine Orchids as *Cattleya crispa? Stanhopea grandiflora* var: supposed not to be correctly named. *Stigmaphyllum ciliatum*, *Clerodendrum Japonica*, *Hydrangea Japonica*, *H. hortensis*, *Gloxinia rubra*, *G. albo-sanguinea*, *G. speciosa*, *Achimenes patens*, 6 Fuchsias, Snow Drop, Flavescens, Corallina, Chauvierii, Expartera, Gigantea, and other plants—the second premium was awarded him.

Mr. Robertson, gardener to H. Ingersoll, Esq., Green Lane, exhibited some fine new Gloxinias—namely, Griffinii, rubra grandiflora, Pulcherrima, Godfroid de Bouillion, &c., and some large Achimenes; longiflora, A. longiflora alba, &c., &c.—3rd premium awarded.

Other collections were exhibited of which we cannot say much. Thos. Meehan, gardener to C. Cope, Esq., exhibited Achimens gloxinæflora, new and rare—A. Skinnerii, A Liepmannii, A. grandiflora, A. Venusta, A. rosea, Adamia versicolor new Nat. Ord. *Hydrangeaceæ*, *Beloperone oblongata*, *Browallia alata*, *Angelonia Garderii*, Gloxinia, Marie Van Houtte; Fuchsias, Fair Rosamond and Don Giovannii, and many others for the enumeration of which we have not space.

In the Basket of Flowers was placed the 77th bloom of Victoria Regia, (we apologise for our omission of the 76th in the last report.) A fine collection of vegetables was deposited by Mr. Meehan, amongst other things we noticed very large Onions, well saved, Walcheren Broccoli, early White Corn, White Egg Plants, Victory Peas 20 sorts in all. NECTARINES—Pitmaston, Orange and Elruge; PEACHES, PLUMS, two kinds—a special premium was awarded.

R. Kilvington exhibited Hand bouquets of Flowers, cultivated and indigenous, and obtained prizes for each. Isaac Collins obtained the premium for the design—2nd to Thos. Meehan, and also for Basket of Cut Flowers, cultivated and indigenous. Want of space compels us to continue the report till next month; but an official report has appeared in the "Bulletin."

Collections of Vegetables to which premiums were awarded were deposited by A. Felton, Jr., Thos. Meghran, and John Miller, gardener to Joseph S. Lovering, Esq. A fine collection of seedling Pinks from *Dianthus carthusa*, and *D. imperialis*, also fine Double Poppies we believe from *Paspaver Marscillii*, from the Garden of Thos. F. Croft, Coates Street near the Prison.

National Agricultural Convention.

We are sorry that we cannot devote a larger space to the proceedings of the National Agricultural Convention. The Convention assembled at the Smithsonian Institution, Washington, D.C., June 24th. After some preliminary discussion, the convention having been called to order by Mr. C. B. Calvert, President of the Maryland State Agricultural Society, who nominated Frederick Watts, President Pennsylvania Agricultural Society, as temporary Chairman, and Richard Mercer of Maryland, and Daniel Lee of Georgia as Secretaries, pro tem.

A roll of the States was called to ascertain the number and names of delegates representing the various Agricultural Societies of each State, when the following was reported:

1. *Gladiolus Fanny Rouget*
2. ,, *M. Coudier*
3. ,, *M. Georgeon.*

From the Collection of H. Farnum, Esq.

From Nat. & on Stone *at the School of Design.*

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☞ For proceedings of Nat. Agricultural Convention, see p. 136.

The Importance of a National Botanic Garden.

BY JOHN MURRAY, MEADVILLE, PA.

I have frequently asked myself and others—Why has this country no National Botanic Garden? Why is there not an institution where representatives, or a congress of the flowers of all countries might be seen in a day? Is it because the climate is not adapted to it? No! It is true there are difficulties in the way of cultivating plants natives of polar regions; but for the denizens of sunnier climes there are no insurmountable obstacles. In the midland States there is a Summer sun, which, with the assistance of glass, and coal or wood in Winter, an artificial climate may be formed, adapted to the culture of the spice plants of Ceylon, the lofty PALMS and gigantic FERNS of the West Indies, and the beautiful ORCHIDS of Brazil. Is it because the nation is too poor to form and maintain such a garden? No! It is blest with material prosperity; and already it teems with wealth. Is it because the people are too utilitarian to maintain an institution for the gratification of the curious, or the pleasure of the few who may be interested in such matters? This can hardly be the reason, as a Botanic Garden appeals strongly to the economical interests of a great agricultural, manufacturing and commercial community like this.

Perhaps one reason may be found in the nature and relations of the general government to the governments of the several States and individual citizens. I do not say that the government is weak, but that there is much more independence on the part of the citizens, or at least less interference on the part of the government than in countries where despotic and monarchical institutions prevail. The people are jealous of the thorough organization, and especially of the centralizations in older nations. They do not look to the government

as the master, but the servant. They scarcely ask it to act the part of a guardian. Now if they do not choose the interference of government in the formation of a Botanic Garden, they have not organization enough to do it in any other way.

Perhaps another reason may be found in the fact that the subject may not have been brought before the people sufficiently. We cannot expect them to engage in such an undertaking without some tolerably correct idea of its importance, its value and uses. I write merely for the purpose of calling the attention of those much better acquainted with the subject to its importance—the propriety of its discussion, and the expediency of informing and rousing the public.

Owing to the generally happy equality pervading the citizens of this country, such vast fortunes as are common in more aristocratic nations can rarely be amassed, and never long retained; consequently the surplus for works of taste and elegance is small. It rarely accumulates sufficiently to become a marked feature. This fully accounts for the limited extent of American gardens and the poverty of the collections, which must be felt by those acquainted with European gardens. Such magnificent private collections as those of Chatsworth and Syon-House, are neither desirable nor possible here. They would be contrary to the genius of republican institutions, since the establishment of the few cannot grow to enormous proportions without interfering with the development of those of the many. But if America does not now possess these, there is no good reason why she may not, and should not now have a National Botanic Garden equal to Kew. The first thing to be done is to show to the people the national, social and individual advantages of such an institution.

In commenting briefly upon these, I shall notice first its economical or material value. To understand this, it is only necessary to remember the large place occupied by plants in the fields of the farmer, the mills of the manufacturer, the ware-houses and ships of the merchant. It is astonishing how much ignorance prevails amongst these classes generally, respecting the nature of the materials passing through their hands daily. Now knowledge is power here, as elsewhere. Let the farmer see wheat, rye and maize in their simple, natural state, he will have a much clearer idea of the nature and effects of cultivation. How these plants have come to their present state—how that may be preserved and improved, &c.

These remarks apply substantially to the manufacturer who begins with vegetable products as his raw material, subjecting them to various processes by capital and labor, until they are so much changed that they can scarcely be recognized. Of the utility of plants in medicine nothing need be said, as it is fully admitted. On these and similar grounds a Botanic Garden is highly desirable; but I should be sorry to rest it entirely or chiefly on them. There is a higher reason —knowledge for its own sake—that is, as an end, and not as a means to anything else. We are far too much given to the petty task of testing Heaven's gifts by dollars and cents. We seem to forget that the acquirement and possession of knowledge simply for its own sake, is of any great value. We toil enough for the supply of real and imaginary wants, but forget the higher wants of the intellect. Now I would say, we ought to possess a grand Botanic Garden, because of the facilities it would afford for the study of the vegetable kingdom—

that department of nature on which the wisdom and power of the Creator have been impressed so brightly; and especially upon which He has abundantly lavished the divine quality of beauty. Without such a garden we may gain partial views of the vegetable kingdom, but we cannot see its vast variety and grand harmonious unity. Every zone, latitude and region has its own appropriate vegetable forms. To visit them in their native localities would be to see nature as she is; but since this is impossible, we ought to do the next best thing—bring nature to our own doors. We are furnished with wonderful facilities for this—national prosperity—which affords an abundant surplus for the education of the intellect, and the elevation and refinement of the moral nature. A rich soil, with abundance of water—iron, wood and glass, the materials of hothouses; and enterprise, skill and industry to mould them into suitable forms. Men of daring spirit, who would love to penetrate the jungles of India, and explore the rich forests of Brazil. A wonderful power in plants themselves, by which they adapt themselves to different circumstances. In some the roots may be dug up and transported to any distance—in others, the entire plant may be sent; and in most, seeds may be collected and easily transported. Then our sails whiten every sea, and our ships line every port, bridging the deep from every country to this.

In view of so many facilities I cannot think we shall be long without a Garden, and collection of plants worthy of the nation. If we are, I fear it must indicate a state of mental lethargy in regard to pure science, which, I am slow to believe, exists at the present time. It appears to be a fitting time to undertake such a work. The nation is in all the vigor of youth, and supply has so far gained upon demand, that the whole thing can be done without the least difficulty. This is a transition state, from which it will soon be shown that devotion to mere national interests cannot satisfy. Intellectual capacities and tastes are awakening, which demand sustenance not less than the stomach needs its portion, and the back its covering.

I trust this subject will receive that attention which its importance demands and deserves.

[For the Philadelphia Florist.]

IMPRESSIONS OF EUROPEAN GARDENING.

FLOWER SHOWS, TREES AND FRUIT.

According to promise, I note for your readers impressions on horticultural and floral subjects in this vast gardening field, and hope they may be applied beneficially to some of those who have an interest in beautifying the homestead, decorating the city garden, or arranging the parterre. Nearly all the inhabitants of Great Britain have a direct or remote interest in gardening. The cottager, after the ten hours' toil of the day, resorts in the evening to the cleaning of his garden patch of early kidney and golden cup potatoes, his bed of cabbage and cauliflower; whilst the female portion generally twine a clematis, a rose, a pyracantha or a jasmine over the door or the windows in bower form. These ornaments are not denied by nature to any of our Americans, with the additional favor of a luscious grape vine or

a choice peach. The heavy crops which they obtain off a very small piece of ground is surprising; with deep digging, heavy manuring and always two crops on the ground, the produce of fifty feet by one hundred, grows potatoes and other vegetables for a small family—no refuse, all is returned to the garden, where they grow as fine onions in five months as we do in sixteen.

The garden of the homestead or the farm-house contains generally from ¼ to ½ acre, and is kept in order by the man-of-all-work, assisted by the matron of the house; her orders are at once and immediately obeyed; they are like the laws of the Medes and Persians. A neat hedge forms the enclosure, frequently with a low wall on the North. The dwelling is covered with apple, pear, plum or apricot trees; and I was frequently surprised to see the fine keeping displayed. Roses and hollyhocks were favorite flowers, though frequently there was a neat collection of Phlox, or other hardy herbaceous plants, especially where the younger members of the family had grown up to take their part in ornamental affairs. It was a matter of warm attraction to me, to see the mother, daughter and sons, all congregated together in the garden *sanctum*, discussing, arranging, cleaning and planting their favorites; a pleasure, indeed, to see the miss in her teens handling the budding knife to multiply some favorite fruit or rose, and to watch its development with enchantment at the success of her handiwork. We at once cast our inner mind to our own fair States, and asked the question—how many of our free born maidens devoted a leisure hour to such rational and beneficial enjoyments? It is true, my personal acquaintances are limited, but I could only toss in my mind five young ladies who really took a hand in such matters of perpetual pleasure. There is no time so intellectually rich as that devoted to the observation of nature's products from every clime. The gardens of the Europeans are also well stocked with small fruits, such as strawberries, gooseberries, currants, black, red and white; all of which we can luxuriate in, except GOOSEBERRIES. We do not, however, give those small fruits so much nourishment as they actually deserve; they require very rich, deep soil, having a copious supply every year, giving black currants a shady situation on the north side of the fence. We often hear many sigh for the fine fancy hedges of Great Britain, but we overlook a hedge of far more grandeur than any that that country can boast of, a hedge of HIBISCUS SYRIACUS, or *Althea*, easy of culture, easily kept, and a floral diadem from July to November, of any color, from white to purple—a fence such as England's wealth cannot produce, may enclose every farmer's garden from Florida to the lakes—all that it requires to keep it in perfection is a close pruning or shearing every winter, when no other labor can be performed. Their few favorite pears are *Gansels Bergamot*, *Louisa of Jersey*, (as they name

Bonne Louise de Jersey) *Williams' Bon chretien*, or *Bartlett and Jargonelle;* the last is a universal favorite, being a fruit adapted to a cool climate. If you ask in Britain what is the best currant, they say VICTORIA. That appears to be the all-inspiring name for every good thing, *and not a few very indifferent ones.* The common red currant that we now grow is mostly discarded from every modern garden; but we say in apples and pears they are behind any common farm orchard of the United States.

The gardens of the wealthy are gorgeous, and often in the most perfect keeping, in extent from five to fifty acres; even some of their pleasure grounds enclosing five hundred acres, twenty to thirty acres of which is mown by a very ingenious and indispensible machine every ten days or two weeks. This machine is drawn by a horse, as fast as he can walk, covering four feet wide, and cost about $100. The trees in the lawns however, are entirely deficient of the symmetry, growth, and verdure of those of the States, the heads of them most frequently indicating by their growth that the wind has always blown upon them from one quarter. The evergreen shrubbery far eclipses any thing that we can compete in or ever will be seen in the middle and eastern States, till some new suitable plants are discovered; but all south of Washington may be ornamented with even more lively green, for if we have to drop the Aucuba and the Rhododendron, we can take up the Evonymus wild orange and the magnolia. Their leading evergreens are Laurel, (Portugal & Common) Bay, Holly, Laurustinus, Aucuba, Rhododendron and Sweet Bay, with Ivy in profusion for covering old walls and shady places, where its perpetual verdure forms a mantle or carpet of fascinating green—with us a neglected plant, and rarely applied where it is applicable. Give the plant good rich soil, and moisture to start its first few years' growth, when it will rapidly reach its intended boundary. Another neglected plant with us, and always employed by them in every imaginable shape, is the English Yew, and it does luxuriate with us. Give it good soil, and it will grow in sun or shade; a yew within two miles of Philadelphia, planted by its present owner, is 25 feet high and 40 in circumference. The Privet (Ligustrum vulgare) is one of the most useful plants for forming evergreen hedges; its rapid growth, and beauty when covered with its delicate flowers ensures for it many admirers. We have said this much in favor of privet, because it is before our eyes in sombre green, and gives a clothing and shelter to a situation otherwise bleak and bare. In the United States we have other substitutes even at our own door, if we would only make them available—such as Hemlock Spruce, Virginia Cedar and American Arborvitæ. Where these are not at hand, nor a disposition to procure them, the Althea is universal, and you have only to stick in the young shoots, cut into 8 inch lengths, in

good rich soil a few inches apart, and in two years you have the embryo of a beautiful hedge. A splendid pattern may be seen under the indefatigable Mr. Graham, at Blockley, near Philadelphia.

Regent's Park, London, June 30, 1852.

Dear Sir: To give you or your readers a detailed account of a London Flower Show, would go rather beyond my intention, if however, I serve you the cream, you will excuse the sediment. The bedding out system as it is called, is practised to some extent in the gardens, but more of that anon; I cannot pass over, however, a bed of Giant of the Battle's (Scarlet) Rose, edged with Nemophilla insignis (blue) both in full splendour, the charm was irresistible, but to the flower tents covering nearly two acres, including the Rhododendron Show. The first entered by me was the Fruit department. One dish only of Muscat Alexandria and another of Black Hamburgh, were finer than our Philadelphia Shows of the same, these were perfect in the extreme, very large and plump, the latter perfectly and the former barely ripe, the Hamburgs was as large as Orleans plums, and the muscat nearly as large as Bolmars; the other grapes were *mediocre* and several lots much tossed, and one entirely destitute of bloom. The Pine Apples were abundant and weighed from four to eight pounds each. Nectarines the same sorts that we generally show and did not exceed samples that we have seen from Mr. Longstreth or Mr. Cope; Peaches inferior to bushels we yearly exhibit, and only a few dozen exhibited, consisting of Noblesse, Royal Georges and some others; Strawberries, the fine sorts were La Leguiose, British Queen and Myatts Elenor, others inferior, the B. Queen has one decided fault, that it does not uniformly ripen well to the point, we do not think it more than second-rate in flavour in its greatest perfection; Cherries, such cherries we cannot produce, especially that basket of Elton's, brilliant as refined wax—Early Black, shining like polished ebony, they had evidently been all carefully wiped and laid with their stems inward in the softest silk paper; you could not pass them without a smile.

Calceolarias, all of the herbaceous sorts and beautiful, the plants were about six feet in circumferance, having every flower and shoot tied into its position to give a rotund form to the plants disagreeably artistic, with a forest of sticks to each plant, one of which had seventy-three, my taste would have disqualified such shameful objects, I did not note any of their names, being forced on by the crowd, who rushed forward to the adjoining stands of fancy Geraniums, they eclipsed all my ideas of their beauty, plants naturally of a dense bushy habit, requiring very little timber for support, and exhibiting a mass of flower equal to all the butterflies of the American Continent, if placed in the

New York Crystal Palace—I gave the prize to (who got it I cannot tell), the collection of eight sorts, consisting of Madam Rosalie, Delicata, Queen Victoria, Magnific, Hero of Surrey, Empress, Queen of France, and Prince Galizin—the specimens were from two to four feet across, and about two feet high, one mass of bloom and evidently arranged in regard to color by a master hand or the eye of a painter —Heaths, to see their beauty, visit a London Show or Edinburgh Botanic Garden, the plants were from two to five feet high, and from six to twelve feet in circumferance, one uniform picture of bloom, and verdure from the pot to the tip. Mr. Smith, of Norwood, obtained the Gold Medal for the following sorts: Irbyana, tubata, tricolor, retorta, Cavendishii (yellow,) ampullacea, Bergiana, tricolor elegans, Rollisonii, mutabilis, metuliflora and tricolor rosea. The prize hothouse plants were specimens of equal merit with any of the preceding, they contained Dipladena crassinoda, Franciscea augusta, Kalosanthes (Crassula) coccinea; Ixora javanica and coccinea, Catharanthus (vinca) rosea, Sollya linearis, Leschenaultia biloba (blue) superbly grown and in full bloom plant full two feet wide and high, Indigofera decora, Allamanda cathartica and Schottii, Epiphyllum grandiflorum and hybridum; amongst these you will observe five of our most common plants, grown to a very great size in pots of from ten to fourteen inches in diameter. Orchids or air plants formed a very important item in the display and as many of them as would have filled the lower saloon of the Chinese Museum, in Philadelphia, the specimens of great magnificence, many of them valued as report says at fifty guineas each; the following twelve were strikingly elegant in the colors and profusion of bloom; without flowers the plants had no particular attraction to common observers, unless for their destitution of grace and oddity of form, Ærides odorata, Oncidum lanceolatum, Dendrobium densiflorum, Calanthe veratrifolia, Ærides affinis and masculosa, Phajus albus, Saccolabium guttatum and prœmorsum Cattleya Mossii, Phœlenopsis amabilis and grandiflorus. The Fuchsias were in profusion and entirely too much alike, many specimens from four to six feet high, and as wide, all densely clothed with flowers; I noted Pearl of England as the best light, and Kossuth as the best dark variety.—The Rhododendrons were just past their prime, but had evidently been one undulating wave of bloom of every colour, from pearly white to the richest crimson, including the golden yellow javanicum from the Himalaya mountains and perfectly hardy.

It was a late season with the Roses, a few of the new sorts exhibited the blooms rather imperfect and few competitors. At these monthly shows there are many competitors for every prize, all staging plants of unique character in regard to growth and bloom, so that a very grand array is brought together of all the talent in England

where money and labour are abundant. The gates were opened to fellows and visitors at 2 o'clock, and in one hour thousands had entered, so that by 4 o'clock the whole grounds were covered by at least ten or twelve thousand, gay looking, richly attired inhabitants of the city of the world. The day was propitious, and it was reputed to be one of the finest exhibitions that had ever taken place.

R. BUIST.

National Agricultural Convention.

(*Continued from p.* 128.)

N. Hampshire, 8; Vt. 3; Mass. 25; R. Island 3; Conn. 4; N. York 20; N. Jersey 2; Penn. 5; Del. 6; Md. 23; Va. 10; N. C. 1; La. 2; O. 12; Ky. 2; Tenn. 3; Ind. 3; Ill. 2; Ark. 1; Mich. 4; Texas 1; Wis. 2; D. C. 11; Total 151, from 23 States and Territories.

A committee of seven was appointed to nominate permanent officers. Mr. King presented the following from the committee:

President—MARSHALL P. WILDER, of Massachusetts.

Vice Presidents—Henry Wagner, N. Y.; Frederick Watts, Pa.; Chs. B. Calvert, Md.; Wm. F. Hunter, Ohio; George W. Nesmith, N. H., John Throckmorton, Va.; H. K. Burgwyn, N. C.; T. J. Rusk, Texas; James Duane Doty, Wis.

Secretaries—Wm. S. King, R. I.; B. P. Johnson, N. Y.; J. A. Warder, Ohio; J. D. B. Debow, La.

The President addressed the Convention. We have not space for his remarks.

Mr. Holcomb, of Delaware, (or Holkam, as it is in some reports,) moved for a committee to draft a constitution for the organization of the United States Agricultural Society, and report other important matters. On this motion there was considerable discussion.

James Gowen, Esq., Mt. Airy, Phila. Co. Pa. said that a motion had been made to appoint a committee to draft a constitution for a society which had not yet been formed. The question as to the expediency of the formation of such a society had not been considered or decided. It should first be considered whether such was expedient. His own impression was that it was not; and he was decidedly of opinion that such a Society could not be maintained. After an animated discussion the motion for organization was carried, and a committee appointed of members from the several States, 25 in number. We are obliged to abridge the report.

Mr. Gowen was obviously overruled; but we do not see why he should not be allowed freely to state his opinion, without being violently attacked by hired reporters or correspondents of a New York partizan journal. The Society adjourned *sine die*.

☞ The Ohio Cultivator, August 15th, publishes a communication from JAMES GOWEN, Esq., explaining his course of action towards the organization of the U. S. Agricultural Society, formed, he maintains, without any pre-arranged plan, or without having ever entertained the very doubtful question of the expediency of such a Society, with a central executive and officers to promote sectional interests totally dissimilar—to embrace within its expansive folds the Southern cotton planter and the Northern free-soiler, full of nostrums so loathsome to his Southern brother. But we shall see anon.

SUBURBAN GREEN-HOUSES.

Mr. Editor:—Having recently erected a Green-house, which, I think, possesses some advantages over those in general use, I send you a description of it, which, if it meets with your approval, may perhaps be of service to some of your readers who contemplate building. The only peculiarities consist in the mode of collecting and distributing the rain water from the roof, and in the arrangement of the centre staging. In our cities, where the hydrant water is introduced, the use of rain water is of course unnecessary; but in the country, where there is no accessible stream to drive a *ram*, a convenient arrangement for collecting the rain water is of the utmost importance.

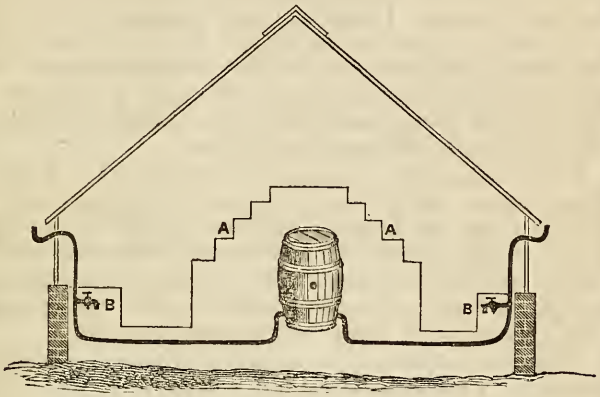


Fig. 1. Is an end section of the house.—The staging is entirely boarded in air-tight and forms inside or under it a commodious room for potting plants, keeping tools, pots, soils and dormant plants; and is also an excellent place for forcing rhubarb, mushrooms, &c. This enclosure or room is lighted by panes of 8-10 glass, set in the "riser" of the second step of the stage at A, at intervals of about 2 feet all around the stage. The oil casks E, for containing the rain water, are placed at each end of this room, and are consequently hidden from view outside. The water from the spout at the eaves of the roof is conducted through a $1\frac{1}{2}$ inch pipe under the walks, and enters the casks a few inches above the bottom of the cask, so that the sediment, which collects in the bottom, will not be liable to cause an obstruction in the pipe; for the same reason, a small piece of copper wire netting must be put over the mouth of the pipe where it enters the eave spout. If the house is large, it is better to have two or even four casks at each end, connected together with short pieces of lead pipe. At B, under the front stage, is a large draw cock, where the water is drawn for the use of the house and which is also completely concealed.

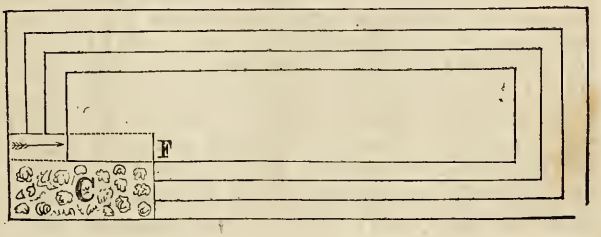


Fig. 2. is a ground plan of the centre stage; the steps and staging extend all

around, except at C, where a slice (so to speak,) is taken out down to the level of the walks. This space is used for large plants in tubs, which completely conceal the entrance (which is by a glass sash door) at F, to the interior of the stage. There are several advantages, I conceive, in this arrangement, one of which is that it greatly diminishes the volume of air to be heated; and also furnishes a useful and commodious room for various purposes; whereas in ordinary houses this space is almost entirely lost in consequence of its inaccessibility; and frequently a due regard to neatness prevents its being used for *any* purpose.

The advantage in the arrangement of the water is, that it entirely dispenses with the expense of an under-ground cistern, pump, and the labor of pumping. I do not, of course, suppose that this arrangement of the centre staging will be adopted by our commercial gardeners; but I think it is particularly adapted to greenhouses and vineries at a gentleman's country seat, where neatness is so desirable. I am not sure that this plan is entirely new, but I have never seen any thing like it, either in this country or Europe.

I have endeavored to explain the arrangement of the house as clearly as possible; but if I have overlooked any thing, I leave my address with you, and my gardener will take pleasure in showing the house to any of your readers who may require further information. I will merely add, that the house has been in use a long time, and has succeeded admirably. I omitted to mention that the heating apparatus (hot water pipes) is under the front stage or table.

With my best wishes for the success of your excellent and *practical* periodical, I am very respectfully yours, D. R. K.

MR. EDITOR :—Perhaps you will recognize in me one of the individuals who gave the negative when your periodical was proposed.—I did not doubt of the public want, nor of the material aid to support it, nor of the local habitat of the work; neither, sir, did I question your ability. But your electric movement was a shock to our nerves that cast us into a trance that is yet barely dispelled—our eyes are open; we say go on—fear no critic—the length and breadth of the Union is your palladium. Honor to all—honor succumbs to no fiction or faction. The Florist and Journal will yet circulate in precedence of all others, at double its present price, for the following reasons, 1st—That its editor is not a nurseryman or florist, nor in any way connected with such; his opinion is not, therefore, regulated by his stock or his pocket. 2d—He is practically, classically and chemically acquainted with the business. 3d—The contributors, apparently, are principally practical men. 4th—It presents one illustration of a plant in every number (did your prospectus promise this?) 5th—The price almost a gratuity to your subscribers, 8 1-3d cents a number. In case some of your subscribers ask what have I to do with that, I will inform them I love mignonette, and like a supply during winter.—That I obtain bountifully in pots, or a small fancy box, having always a few duplicates for my friends. About the first of September I buy 12½ centsworth of seed, and procure some rich soil from the woods, and mix therewith one-half fine loam with a little fine road or river sand; sow the seeds on the surface, pressing them down with the bottom of an empty pot; give a copious watering every evening and

morning, covering the box or pots with a newspaper during severe sunshine till the seed vegetates and makes its appearance; I then remove the paper entirely, keeping the plants fully exposed; watering as usual twice a day. When the plants are one-half an inch high, I thin them out to three inches apart; on the appearance of very cold weather I remove them to the house close to the window, and never allow any fire heat where they are till they begin to bloom, when they are taken to the coolest window in the parlor, when they regale us from December to February. I never allow my plants to seed.

Yours, &c. J. G.

FOREIGN GRAPES.

DESCRIPTIVE LIST.

Prepared for the Philadelphia Florist, by James Powell.

No. 12. Eschalot, continued.—Bunch slightly shouldered, like black Hamburgh in form and color; fruit well flavored, slightly fleshy and delicious; according to our informant, one of the most delicious grapes cultivated.

Mr. Powell not having had experience with respect to the fruit of this vine, a friend has furnished us with the above description of the fruit, adding that he considered the *Eschalot* grape, procured from R. Buist, with cut leaves, (though he doubts if it is the true Eschalot of the French) a very desirable fruit, and of quite a hardy character if properly situated, as it produced good bunches in the neighborhood of Philadelphia, but being on a bad exposure it was eventually killed. We are informed that it received its name from its being grown on poles in the vineyards of Europe.—Ed.

13. Frankendale, *Frankenthal.*—Young wood light green; foliage dark green, irregularly lobed, often entire; footstalk long, of a brownish hue; bunches tolerably large, with small, handsome shoulders very much resembling the black Hamburgh; berries large, shape nearly oval, with a thin skin of a deep purple color approaching to black, bearing a blue bloom; sweet and excellent flavor, might be easily mistaken for the black Hamburg, which it much resembles—indeed some suppose it to be but a variety of that grape.

14. Frontignac Black, *Black Frontignan, Black Muscat.*—Young wood light green, smooth foliage dark green, not deeply serrated; footstalk stiff, rather long, of a reddish tinge; bunches small and short; berries round, not very large, with short stems, quite black when fully ripened, and well colored, having a rich musky flavor; indispensable in a vinery, being remarkable for bearing.

15. Frontignac White, *White Frontignan, White Muscat.*—Young wood light green, smooth; foliage dark green, altogether very similar in appearance to the last; bunches rather long, without shoulders; berries round, medium size, closely set on the bunches, of a muddy white or greenish yellow color, covered with a thin white bloom—a very rich fruit, with a high musky flavor. By those who prefer musk flavored grapes, this is considered the best; though the white, black, and grizzly differ in little else than color, they are all good, and should have a place in every collection.

16. FRONTIGNAC GRIZZLY, *Grizzly Muscat.*—Young wood light green, smooth; foliage dark green; lobes not deep, broadly serrated; footstalks short, slightly tinged with a brownish hue; bunches of medium size, with small narrow shoulders; berries round, larger than those of the White Frontignac, and growing closer on the branch, of a pale brown color, intermixed with red and yellow; very rich and musky flavor.

17. FROMENTHAL.—Scarcely different from the Black Hamburgh, not demanding a distinct description.

18. FRONTIGNAC BLUE, *Purple Constantia, Black Constantia.*—Young wood light green, smooth; foliage dark green, lobes not deep, the old leaves recurved, turning purple, mixed with orange before falling; footstalks short, reddish; bunch very long, berries round, rather thickly set on the bunch, of a medium size, black or deep purple color, and very rich flavor.

19. GROVE END SWEET WATER, *Early White Malvoise.*—Young wood green; foliage green; lobes not deep, slightly incurved; footstalk short, green; bunch rather long, compact; berries closely set, roundish oval, of a dull greenish yellow, thin skin, sweet and good flavor—a profuse bearer.

20. GROS MIER DU KENTHAL.—Young wood light green; foliage dark green, deeply lobed, broadly serrated, very rough on the under side; footstalk longish, rough, with a purple tinge.

21. HANSTRETTO.—Young wood light green; downy foliage, dark green; lobes rather deep, broadly serrated, very downy on the under side; footstalk long, downy, of a brownish hue; bunch long, loose, berries medium size, oval; longuish footstalk, with a thick skin of a dark purple color, sweet, with a little acidity, but pleasant—a very good grape for growing in the open air.

22. LOMBARDY BLACK, *West St. Peters, (Poonah* of some.)—Young wood light green, changing to a blueish color before ripening; joints rather short; foliage dark green; rather small lobes, not deep, irregularly serrated; footstalks long, smooth, with a blueish tinge; bunches long, with large shoulders; berries large, round, even size, of a very black color when fully ripe—a very high flavored grape.

23. LASHMERE'S SEEDLING.—Young wood green, smooth; foliage dark; rather small green lobes, not deep, bluntly serrated, downy on the underside; footstalk shortish, green, smooth; bunch medium size, compact, berries closely set on the bunch, even size, roundish oval, of a dull, greenish yellow, covered with a thin white bloom—a grape with a very rich saccharine flavor, remarkably early, and excellent for fruiting in pots, being a great and steady bearer.

24. MUSCAT MUSCADINE.—Young wood green; foliage dark green; lobes various, not very deeply serrated; footstalk long, pendulous, smooth, with a reddish tinge; bunch rather long; good size, often with two neat shoulders; berries even size, on long footstalks, loosely set on the bunch, round, a little flattened at the base, the skin thin, transparent, greenish yellow, covered with a thin white bloom, of a fine sweet musky flavor—a free bearer.

A fine specimen of Gros Mier du Kenthal may be seen at J. C. Green's, Esq., New Brighton, Staten Island. Ed.

PRUNING---By T. Hutchinson.

(conclusion.)

The seasons for pruning are midsummer and midwinter. At the former season new and superfluous shoots and branches should be removed; at the latter period the thinning and arranging of the different parts of the tree should be attended to. The winter pruning is, however, sometimes finished in the autumn, the gooseberry, for instance, is sometimes pruned before winter, and the grape vine when weak. The effect is found to be that the shoots become stronger the ensuing season. This is quite reasonable, as a little reflection will show. During the season of rest in winter, a plant continues to absorb food slowly from the earth by the roots, and if its branches remain unpruned, the sap at that season introduced into the system will be equally distributed to all parts of the plant. If late pruning is had recourse to, and part of its branches are removed, of course a large portion of the accumulated matter will be wasted, and the remaining portion of the plant retains no more than its exact proportion as to the entire size of the original tree. No increase, therefore, of growth is taken advantage of—whereas on the contrary, when early or autumn pruning is adopted, the excess of wood is removed before the sap has accumulated in them, and then all that the roots can collect during the winter will be stored up, and a more vigorous plant will be the result at the approach of spring.

The object of pruning is not invariably to increase the vigor of a plant. The spring may prove the most judicious period, if not defered till the sap is in rapid motion.

Taking the Fig as the type of that section of trees which produce the fruit on the wood of the same year, it should, when trained to a trellis, be pruned in Winter, as that is the best season to encourage the young shoots on the lower branches. The Summer pruning of this fruit is performed by pinching in the ends of the young shoots at the third or fourth leaf bud, whereby short jointed wood is produced. This mode lessens considerably the Winter pruning, which should be performed immediately after the leaves have fallen; always bearing in mind that on the young wood the fruit is produced. The Walnut may be also brought into a bearing state in this way when over luxuriant.

The above observations I now conclude; and they are as you desired, merely practical hints, as I am little else than a practical myself—and things are so fixed now that foreign practicals must look out for breakers ahead; Jeffrey's is about.

To the Editor of the Florist.

Feeling somewhat in a critical mood, perhaps I may be indulged in a few friendly remarks in reference to your July number. As to your remarks in the leading article, about being puzzled twenty years ago to fill a small greenhouse with New Holland, Cape, or tropical plants, they show you have not informed yourself on the subject—at any rate as regards N. H. and Cape plants, as all must allow a great increase of tropical plants of late years; but at the same time they were not so deficient of these as you might suppose.

On referring back to old catalogues, I think you will find even more N. H. and Cape plants in cultivation than at the present day.—

In an old memorandum made many years ago, of plants seen at Messrs Hibbert & Buist, of your city, I find among other plants the following:—Gloriosa superba, Maranta zebrina, Boronea alata, Euphorbia heterophylla, Corræa pulchella, Amaryllis, several species, Swainsonia galegæfolia, Crowea saligna, Diosma ciliaris, capitata, Templetonia sps. Eutaxia myrtifolia, Melaleuca fulgens. Chorizema nana, rhombea, Cunonia capensis. At Mr. Robert Carr's I find Magnolia fuscata, Ixora coccinea, rosea, Malaleuca styphelioides, Acacia dealbata. Are not these N. H. and Cape plants? And on referring to another memorandum of plants sold from a nursery, I find among many others the following, and I have no hesitation in saying you will find some of them rather difficult to purchase at the present time:—Zygophyllum Morgsana, Monsonia speciosa, Podalyria sericea, Myrtus tomentosus, Strophanthus dichotomus, Protea argentea, Acacias, a number of sps., Hovea Celsii, Beaufortia decussata, Epacris grandiflora, Daviesia mimosoides, Banksia grandis, Liparia sphœrica, Latania borbonica, Strelitzia regina, Edwardsia microphylla. In the collection of Dr. Hosack, of Hyde Park, we find Dillenia speciosa, which was also to be found in Philadelphia, and Urania speciosa.

In a catalogue published eighteen years ago, I find among other plants offered for sale, Ardisia elegans, solonacea, Banksia, four sps., Bignonia venusta, Brunia nodiflorum, Bossiæa ovata, Callicoma serrata, Callothamnus quadrifida, villosus. Chorozema ilicifolia, Doryanthes excelsa, Grislea tomentosa, Lambertia formosa, Acacias, twenty-five sps.

I think enough has been quoted to show that florists were not so far behind the age twenty years ago as you would have us believe; and it would perhaps be as well before sending such statements abroad to be well informed on the subject.

Equally wrong are you in your supposition that "our parks were then no doubt quite pleased to give support to such pines as Pinsapo, Pindrow, and Webbiana." Why, sir, Picea Pinsapo was only introduced into Great Britain in 1838, and Abies pindron in 1837, unless it is the same, as it appears to be, as the Webbiana introduced in 1822, (see Donn's Hortus Cantrabrigunsis, 1845.

I think any person knowing our Pine from another, would be pleased if you could show them any park in Philadelphia, or elsewhere, rejoicing in either of these species for their support. I certainly should, if it were only two feet high, instead of a plant twenty years' standing. Yours, &c., T. H., Jr.

We have at least gained another chapter on the "Statistics of American Horticulture." Who shall supply the next? ED.

Seedling Camellias of America,

BY A PHILADELPHIA FLORIST.

The Camellia stands pre-eminent in American Floriculture as a standard plant, useful in almost all capacities as an ornamental evergreen; for the large conservatory it is unsurpassed, as a window plant it is valued, as a Green House bloomer it is amongst the first. For the benefit and amusement of your readers I shall from time to time trace the progress of the Camellia towards perfection in this country,

by describing those varieties produced here and which are generally cultivated, or worthy of cultivation.

The first seedling we shall notice as occupying the attention of the Florist was

C. Japonica var. Floyii; raised by Mr. Floy, Bloomingdale, New York, of a shrubby habit with very large dark green foliage; the Plant always presents a beautiful appearance, a profuse bloomer, its large pink buds promise something extra, but when full blown is a very indifferent flower, proving much smaller than the appearance of the bud had led us to expect. It is now classed as a third rate flower and is only admired in collections for its shrubby habit and foliage before described.

C. J. Var. Landrethii; raised by the Messrs. Landreth of Philadelphia, a handsome shrub when well grown, of dwarf habit, densely covered with foliage, commences to bloom in January with ordinary treatment; flower very delicate, light rose colour, petals imbricated, size medium, a profuse bloomer, its delicately coloured flowers secures for it a more than common share of attention from the visitor; it deserves a place in every collection of a dozen sorts.

C. Prattii; raised by R. Buist of Philadelphia, forms a shrub of vigorous growth, large foliage but not inclined to become a good shape, except by free use of the knife; flower, large; petals imbricated; colour, light rose, sometimes assuming a ragged appearance when the blooms first appear; towards spring the edges of the petals turn up towards the centre of the flower, and assume a bright red colour on the edges. A free bloomer and bears the expanded flower for a long time, worthy of cultivation, contrasts well in the conservatory with others of its class.

C. Binneyii; raised by Mr. J Smith of Philadelphia, is a handsome shrub of ordinary habit; foliage medium size, dark green, commencing to bloom in December, flower of a dark red colour, sometimes with occasional white stripes in the centre of each, petals imbricated, medium size, a profuse bloomer and one of the best general flowers; holds a first rank, it should be in every collection.

C. Hempsteadii; raised by the late firm of Ritchie & Dick, of Philadelphia, a handsome shrub of free growth, large, foliage dark green, of a beautiful appearance, commences to bloom in January, flower of a bright cherry colour, petals imbricated, large size, with a profusion of buds, but will not open well when kept in a damp atmosphere. A first class flower, useful in every collection when properly treated.

[to be continued.]

FLORICULTURE.

What are generally known by the term florist's flowers, are those hybrids or monstrosities which by artificial means are metamorphosed into shapes quite dissimilar to the original stock from which they may have been produced. Thus from *Viola tricolor*, Pensee of the French, Pansy or Heartsease of the English, and Johnny Jump-ups of Yankee land, have been produced the multitude of forms which for the last twenty years, have successively taken the lead as "florist's flowers or show flowers," in their respective classes. From *Georgina mutabilis* and *Dahlia glabrata* have been produced the endless forms and

colours, (*except blue*), which now are met with every where, until Dahlias have become so common or vulgar, or something else not desirable, that almost every person *en bon ton* discards them from his garden plot. Forty Blooms are required this month to compete for a silver medal at the Pennsylvania Horticultural Society. Pelargoniums form another group of the florist's favorites, of all shapes and hues in leaf and flower. They are by no means the most valueless of these artificial creations. Carnations from *Dianthus Caryophyllus* divided into Carnations, Picotees, Pinks, and again into Flakes, Bizarres Selfs, are great favorites with the ladies; Auriculas must not be omitted, Chrysanthemums are now attracting much attention especially the daisy sorts. Calceolarias have had a great run, and Hollyhocks are daily improving; then with Tulips, Hyacinths, Ranunculus, Anemones, Asters, &c., winding up with the never dying Rose, we complete this brief enumeration of some of the varieties of florist's flowers. But how many important points are to be determined before a decision is arrived at, as to the comparative merit of our florist's flowers. How jovially two old fogies of the real old school, will set themselves to determine those nice points of fringed petals, broken calyx, weak stem, open eye, sported colours, imperfect form, and the hundred and one peculiarities of structure or form which at once meet the eye of the practised florist; they can with the greatest facility point unerringly to defects which the botanist never would dream of, nor even the anatomist discover. But they have their standard of perfection. We cannot complain that we are uninterested in the trifling differences, 'tis their *forte* as much as the peculiar insertion of the stamen is a matter of moment to us; allow them to enjoy their *forte*, nay, encourage them in their aim to arrive at what they have decided to be excellence. We must, however, in reply to our clamorous friends in Floriculture promise to engage for their especial benefit, a person to superintend this department, that is when we increase our circulation to such an amount as to warrant the expenditure, or else, rather than make pretensions to be a Floriculturist, we will leave the entire department to the superintendance of the challenge florist, a little further northeast, and confine ourselves to muck and Cabbages, Fuchsias, Camellias and such like; or finally, we must draw upon some of the old Lancashire Heroes for matter in their own line, in their own native style.

Gardens of Industrial Institutions, Colleges, &c.

Horticulture presents its claims to the attention of the public in a very important light, viz: with respect to its influence and profit in public institutions. The reproductive principle now so well understood, partly we must admit by means of the arguments of the Communists a rather unpopular class of Philanthropists, has brought the question to our very doors, and it is now demanded whether Orphan Schools, Charitable Asylums, Alms Houses, Hospital, Prisons, &c., shall continue a tax on operative society or remunerate by their own system of reproductive machinery, society for their establishment and maintainance while in a state of progression; when we see the city darkened by the massive prison and carry our eye around it to discover how much of the soil of the earth has been allotted for its unfortunate inmates, how much of its ameliorating influence has been brought to bear in the shape of a farm, vegetable or even flower

garden, or have the moral wants of criminals ever been considered in this most important particular. Is the criminal no longer a man? can he pass hour by hour, and day by day and never dream of the bright flowers which in the earlier days of innocence bloomed around his path; might not the glorious sight of such, impress him once more with moral sentiments, or if he must remain a criminal pent up from the mass of society, an outcast from their family, yet cared for and protected, being a brother—can he not labour by his hands, producing food, while he protects his frame from disease by enervating toil; breathing even in his misery, the pure air of Heaven, borne to him over the trifling walls which hide from him the busy world, but which cannot outclose the sun or air, or rain, or wind. We fear not but a day will come, when the unfortunate mortal, short-sighted and weak minded enough to break the civil laws of the society in which he moves, will be reformed by the sweets of manual labour in the farm and garden. When the scaffold shall not be re-erected, but the unforgiven of man shall toil for his own and his fellow men's advantage, while he is permitted to live a prisoner, bound by the laws of civil society, for the term of his natural life. We purpose now monthly to speak of Horticulture as a reproductive process, whereby a large amount of food may be raised by congregated bodies in public institutions, and for the present offer a few hints obtained from a correspondent, as to the grounds of Girard College. Every Philadelphian, as well as every lover of his kind, exults at the prospect of the massive pile of marble which stands on the north-west portion of our city, around it is spread a lawn and shrubbery and exercise ground, and a little distant a large vegetable garden or truck patch; with the produce of this truck patch, and the proceeds of grass in the shape of hay from that lawn, we are now concerned. There are, we are informed, about twelve acres; ten acres yielding grass; with two and a half acres occupied with vegetables. The amount of manual labour employed to work the whole varies, according to the season, at times as many as six men have been employed, one man is more generally the extent of the assistance afforded the gardener. The gardener, Mr. Jones, is an active man, and anxious, we believe, to reflect credit on the Managers of the Institution as well as to fulfil his personal duties. Works of alteration and improvement have for the past twelve-months absorbed a large portion of the labour supplied, as may be seen from the following memorandum: Number of days spent,—April 22½, May 80½, June 77¾—reckoning men as days. Total in 3 months, 180 days or 2 men per day for the 3 months. During this period with the assistance of about ten pupils of the College from fourteen years upwards, there was taken off and saved 16 tons 12 cwt., 2qrs., of Hay at $20, and all other necessary operations proceeded with appertaining to such an establishment. The garden crops of vegetables engross a large share of attention, and after a careful inspection, I do not hesitate to say, that they will compare with those of any similar establishment; Mr. Jones obtained the Premium for his Tomatoes at the monthly meeting of the Pennsylvania Society, and to our own knowledge, he gathered tomatoes about the 21st, of June, in quantity. We shall take care to furnish our readers with the annual product of this two and a half acres under the cultivation of Mr. Jones, an assistant and some pupils, who I fear are not very profitable helpers; when the hoes are sharp, and the crops tedious to thin.

CALENDAR OF OPERATIONS,
FOR SEPTEMBER.

Written by Practical Gardeners, for the Philadelphia Florist.

HARDY FRUIT.

STRAWBERRIES.—The early portion of this month is a suitable season for making new plantations of the above. As the strawberry is comparatively a permanent plant, and one that requires continued good treatment, the preparation of the soil in the first instance is important. The soil should be trenched at least eighteen inches deep and well manured; very frequently we have a 'spell' of dry weather just as the fruit is ripening, and on shallow soil they ripen prematurely, attaining neither proper size or flavor—therefore stir up the soil to a good depth, which will enable it to absorb and retain an available supply of moisture for the roots when the top supply fails. There are various methods of planting; they can either be placed in rows of 2½ feet apart and 9 inches from plant to plant, or mark out beds 6 ft. wide and put 4 rows in each, the plants 15 inches asunder every way. Boston Pine, British Queen, and such like robust growers require plenty of 'elbow room;' they do best in hills 30 inches apart, placing 3 plants in a triangular form to each hill; cover the ground between the plants with tan bark, and they will soon commence growth. Old plantations should be treated with a dressing of guano or leached ashes; sow the former at the rate of 400 lbs. to the acre. This valuable manure is most advantageously applied at this season; it should be immediately incorporated with the soil, as its beneficial effects are limited if left exposed on the surface.

Root Pruning.—We would take this occasion to revert to the system of root pruning fruit trees to induce fruitfulness. This is looked upon with diffidence by many cultivators, although its good effects are placed beyond all doubt. Like everything else, a proper discrimination of the subjects to be operated upon, and the manner of performing the operation are alike necessary. Many of the operations in horticulture seem more formidable in the theoretical abstract than they are in the practical reality. In our last we alluded to the system of checking a luxuriant tree by pruning part of the young growing shoots. Perhaps we would state the case more justly by saying that the sap would thus be directed into other channels, with a tendency to burst otherwise dormant eyes, some of which might form fruiting shoots. It will be remembered, however, that we alluded more particularly to pear trees grafted on quince, as our remarks there are scarcely applicaole to free growing stocks. That any system of mere branch pruning will change a healthy, luxuriant tree, from a barren to a fruitful state, we think questionable; indeed, after repeated experiments, we do not believe in it at all. Pruning in winter will not do it, from the fact that the plant is continually absorbing nourishment by its roots, and accumulating sap in the branches (except in frosty weather;) and although we prune off a portion of the branches, the remaining parts are well stored with sap, which affords a ready supply to the buds on the first excitement of spring. The roots are again set in active motion, the branches shoot forth with redoubled vigor, and the tree is further removed from a fruitbearing state than ever. Summer pruning is also inefficient. It is true that a reciprocal action is constantly going

on between the roots and leaves—the one depending, to a great extent, upon the other for support—hence it might plausibly be supposed that the removal of branches during growth would be one of the most effectual means of enfeebling the plant; and no doubt it is, if carried to excess—but enfeebled growth is not indicative of fruitfulness. In ordinary pruning, however, it does not even check luxuriance.—Any person may prove this by cutting the head of a young growing tree in summer; the plant will appear stationary for a time, but the roots being in a powerfully absorbing condition, a reaction will certainly follow, and several branches will shoot up, each as strong as the one cut off. So long as the roots are allowed to extend and multiply, no branch pruning compatible with healthiness will induce a fruitful habit. Hence we resort to root pruning; and by thus getting at the root of the matter, our efforts are seconded by success. If, therefore, you have a plum, pear or other fruit tree which has attained a fruit-bearing size, but shows no indication of a fruit-bearing disposition, open a circular trench eighteen inches or two feet from its stem, and dig down the same depth, cut back all roots you meet, then introduce a spade underneath the ball of earth so that no perpendicular roots may be left, fill in the soil as before the tree is "root pruned," and henceforth the "balance of power" will be changed. We may have something more to say in relation to this subject hereafter.

Gathering Fruit.—There is in general too little attention paid to this matter; pears, especially, should be attentively watched, as many, indeed most varieties, are improved in flavor by being picked before fully ripe. Some of the finest sorts have had hard names bestowed upon them for their insipidity, solely for want of proper management in this respect. They should be gathered as soon as they will part easily from the tree without using force. Our criterion is to cut a fruit in two on the first indication of maturity, and if the seeds are of a brown color, the crop is gathered, handled as carefully as eggs, and laid on shelves in a cool, dark apartment, where they gradually ripen to perfection.

Grapes under Glass.—The principal object with these now, is the ripening of the wood; the roots, if planted inside, will require no further artificial waterings; if the border extend outside, they should be covered in a manner to throw off excessive rains. In bright weather syringe the foliage occasionally, which will keep down insects, and otherwise prove refreshing. S. B.

HINTS FOR SEPTEMBER.

Hot House.—Orchidaceous plants are becoming daily more common as the easiness of their cultivation becomes understood. *Bletias* (Phajus) are in many collections. B. hyacinthiflora, B. Tankervillæ, and B. Wallichii, are about to grow now. They ought to be at once repotted, and abundance of water given; they will flower beautifully in the winter. All orchideæ, grown in pots, should be repotted *after* they begin to grow; they should be shaken out of the pots they grew in, the old decayed roots (which are generally annual) cut off, and placed in the same or little larger pots; turfy peat, with a third of broken pots and charcoal, or old wood, suits most kinds, especially the species of Bletia, Maxillaria, Lycaste and Calanthe. Leaves of Gloxinias of any desirable kinds may now be struck in sand; choose those which are tolerably mature, but not by any means turning color.—

When any of the Gloxinias or Achimenes show signs of yellowness or a disposition to rest, water should be withheld gradually. So with all other plants in a less degree—all require rest at some season; generelly stove plants desire rest in the fall, and resume growth in the winter. The more they are rested in the fall by withholding water, and being kept in a low temperature, the better they will flower when they do grow. Those which are growing require constant syringing and abundance of water; others, as Justicias, Aphelandras, &c., the most extensive family of stove plants, will now be showing flower, and require removal to a dryer and warmer part of the house. Where flues are still retained for heating purposes, see that they are in good order. Gas from the fires, through defective flues, is very injurious to most plants.

GREEN HOUSE, CONSERVATORY, &c.—Pelargoniums that have been cut down, if they have shot forth their buds a little, should be shaken out of the pots they flowered in, their roots reduced, and replanted in small pots—they will make better plants next year than your cutting plants. Chrysanthemums should receive their final shift; I find a sandy loam, with about a teaspoonful of guano to as much soil as would go into a twelve inch pot, the best for flowering them in. The miniature or Pompone varieties drew much attention last fall, and will probably become very popular. Fuchsias, Cinerarias, and Calceolarias ought to be procured now and kept growing all winter. Mr. Saunders' paper in the last on the Calceolaria, is worth more than a passing perusal. I have seen years ago *how* he grew them, and believe he has kept back no *secret*. The Pansy has for some years fallen into disrepute; it "could not be grown." Latterly they are "getting up" again—they are truly "Johnny-jump-ups." Sown now, kept in a very cool greenhouse, and repotted very early in spring, there is no prettier ornament of the greenhouse. When they have done flowering, they should be turned out of pots into a rich, moist, partially shaded and cool situation for the summer season, and propagated from cuttings in the fall, at the same season as we sow the seed. Carnations and Pinks have also fallen off, undeservedly so. To be grown to perfection in America as in England, they must be flowered in pots, the rooted cuttings or pipings ought to be potted now, and encouraged to root well before winter; early in November they should be potted in sandy loam, with a portion of well rotted cowdung, and kept growing in the greenhouse. If the societies were to offer premiums for Pansies, Carnations and Pinks, about three months earlier than they do, we should hear of a success in their cultivation over that of the old country, equal to that obtained by the world-renowned VICTORIA REGIA. As soon as the weather becomes cool and moist, take up any spare Spiræas, Dentzias, Persian Lilacs, &c., and pot them carefully; get them well established before winter; if there be command of a little heat they will flower beautifully in the winter months, or very early in spring. If Dahlias are wished for seed, with the object of producing fine varieties, mark the finest flowers on each wished for kind as they bloom—the first perfect flower the plant produces is the most likely to produce a fine progeny. The centre spike, or first flowering of a stock, produces nearly all plants of double flowers. If the annuals desired for winter flowering are not yet sown, don't delay; "stock gillies," and wall flowers must be sown in fall, or they will not flower next season. Dentzia gracilis promises to be a valuable winter flowering shrub—flowers white, like the wild cherry, and pendulous.

Flower Garden.—Attend to the saving of seeds desired. In all plants seeds of the first flowers produce the best progeny; all biennial plants should have their seed sown as soon as ripe. In this country, many plants, annuals in England, are best treated as biennials—Ipomopsis picta, Rocket Larkspurs, and Chrysanthemum ericoides are instances. Where any of the hardy annuals are desired to flower early and fine, they should be sown in a dry sheltered situation as soon as ripe, and transplanted in spring to where they are to remain. About the end of the month, Tulips and Hyacinths intended to be bloomed in the open ground, should be planted; the soil should be of a moist nature, but not wet, loamy and well dressed with stable manure—coal ashes mixed with it improves it; I have seen finer hyacinths in America under such treatment than in any country else. They ought to be put about four inches deep in the soil.

In the last month's paper the reader is requested to correct "herbaceous plants delight in perpetual shade," to *partial* shade—an error of either the printer's or writer's. Continue to propagate by division of the roots or seeds; the earlier after flowering they are divided the better plants they make; and if the seeds are not sown till spring they will not germinate till the next. America is peculiarly the country for herbaceous plants; they are neglected only because they are natives. "Mr. ——, what is the name of that *elegant* plant?" "Dodecathon Meadia, Madam." "O! how *very* pretty; what is the price?" "75 cents." "I will take one home." My friend, who had not sold hitherto many herbaceous native plants, partially mused on the growing taste for them, and partly (probably) on the price he could obtain for them, when the following—"Mr. ——, what country is it from?" led him to reply with a glow of pleasure, "Why, Madam, of our own; it is a native plant." "O, a wild thing! Then I don't want it."—The anecdote speaks for itself. Evergreens of all kinds are best planted at once; if not finished by the end of the month they are best deferred till April or May. The soils best adapted to the different kinds are not at all studied; they ought to be—no trees suffer more from unkindly soil than evergreens, especially Coniferæ.

Vegetable Garden.—Celery should be earthed up once a week, if growing strong and earliness be desirable; it ought not to be done too soon, but rather watered frequently with strong soapsuds or manure water. Do not earth up much at a time, or the hearts are apt to rot. Potatoes should be taken up as soon as the vines are decayed; in storing them, place a little earth among them to prevent them sweating, which causes them to sprout and become weakened. The main crop of white Turneps should be sown at once; transplant Endive—they love a rich loamy soil. Radishes and Lettuce for the fall may be still sown. Cauliflower, sow about the middle of the month—the Walcheren does pretty well, comes in after the Dutch. Onions may be sown by the end of the month in a sheltered spot; transplanted in the spring, they make fine bulbs the first season. Sow Early York Cabbage at the end of the month. Sow some prickly Spinage by the middle of the month, on moist rich soil—if the winter prove mild they will live over the winter, and come in early. Attend to directions given last month for keeping down weeds—if hoed up, as they ought to be before they seed, they enrich the manure heap. Keep every department clean, every tool in its place, and labor will become a pleasure and the garden a paradise. T. J.

NOTES CENSORIAL.

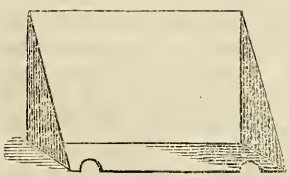
As the space you allow for our "Notes" is rather restricted, we will confine our censorship to one or two subjects which seem to us to require correction.

The Monthly Tour of Inspection.—We are informed that you made a mistake in your distribution of offices on the place of Mr. Welsh—Mr. Shields being *farmer*, and Mr. Ross not his assistant, but *head gardener*.

Achimenes Gloxinæflora—Really a horticultural gem; but we must say that your plate of it is most striking evidence of the loss to your subscribers by the death of Mrs. Hill. We hope they will suspend their judgment of the flower until they see it in bloom, or a better representation of it. The plant has been in this neighborhood nearly two years, and was exhibited in a collection of Achimenes in the spring of 1851, What you say of the value set upon new plants at the exhibitions of the Penn. Hort. Society is painfully true. We saw the other evening there (August stated meeting) a few spikes of Gladioli Gandavensis and floribundus labelled "*new, and shown for the first time.*"

Penn. Hort. Society.—Still the same discernment in bestowing premiums. Isaac Collins, gardener to Gen. Patterson, exhibited a large collection, which received first premium, probably because it was the President's. Mr. Bisset's second, because it was the best. The prizes awarded the designs seemed to be made on the same principle. What ails that committee? What rules have they in judging of the best and most interesting collection? Is it size?—for then the lucky man who flowers the biggest Hydrangeas can always take the premium. A committee should have some knowledge of plants, their variety, growth, &c. The exhibitions of the Society will certainly fail, if gardeners feel assured that their fine collections will be passed over, or a place assigned them inferior to their merits. BROUGHAM.

As Mr. Saunders furnished us with a sketch to illustrate his remarks on the introduction of Grapes into Greenhouses, which we could not have engraved in time to insert with the communication, our readers will find it annexed:



"It consists of a wooden frame made to fit into the upright lights in front; the end pieces taper from a point at top, to a breadth of 8 or 10 inches at bottom; board at bottom same width, and furnished with two semi-circular holes for the introduction of the vines. See p. 114, Aug. No.

☞ W. D. Breckenridge has been appointed to superintend the improvement of the public grounds at Washington, in the room of the late A. J. Downing. Mr. B.'s extensive knowledge in the various departments of horticulture promise that the public will not lose so much as was anticipated in this department by the late accident.

The Florist and Horticultural Journal.

Philadelphia, September, 1852.

OUR LOST FRIENDS.

The issue of our last number was accompanied with the melancholy tidings of death. A fatal accident, unequalled for some time in the northern States, robbed the readers of the Florist of the services of Mrs. Anna Hill, as an artist—to us the most immediate concern; but it also deprived the horticultural world of the services of A. J. Downing, late Editor of the Horticulturist.

For us, who were but partially acquainted with Mrs. Hill, it would be useless to expatiate on her fine qualities, or to add to the sorrow which her sudden death has caused in the large circle of her acquaintance; we will only afford a passing souvenir to her memory, since words are not sufficient evidence of sorrow; and it is to be hoped that her services in the department in which she was engaged will be appreciated sufficiently to warrant a fit tribute of respect being paid to her memory.

What shall we say with respect to Mr. Downing's loss? In him the American people possessed one man with pure taste in horticulture, and of much skill and experience. As a writer, he pleased most parties by a conciliatory course of conduct, refusing to allow the feelings of his supporters to be hurt; he managed to maintain as good feeling amongst his numerous correspondents as it is possible to secure. We have heard with pleasure that a eulogy will be delivered on his character, at the meeting of the Pomological Congress, on the 13th of September, at Philadelphia, by M. P. Wilder, Esq., at the request of W. D. Brinkle, Esq., President.

Death has also snatched away a young friend of ours, Willie Kane, a high-minded youth, whose precocious talents had no doubt led to that premature departure from this busy scene, which now overwhelms his relatives, and creates deep feelings of regret in the minds of those who shared in his sports and lively joyousness of spirit which characterized him. A rather protracted sickness had partially prepared the minds of his relatives for the result. He died on the 25th August, at the residence of his father, Hon. John K. Kane, in this city.

Died, on the 25th August, Samuel Murphy, gardener, formerly of Dromore, Co. Down, Ireland, and late of New York. He was cut off in the vigor of youth by a few days' sickness, a fellow-laborer of our own, with whom we spent many of our early gardening days.

The violent form which dysentery has lately assumed, should be known to all who are not prudent in their choice of fruits.

Nothing is more characteristic of refinement in civilized life than the encouragement extended to those arts and sciences of decoration which tend to beautify the homestead, and make the dwelling of man a place of rational enjoyment, soothing in its effect on the ruffled temper after its contact with the mercantile bustle of the city, and bringing the mind back by stealth to the contemplation of those gifts intended for our gratification and amusement. The individual who delights in his leisure moments to walk with nature, to view the Divinity in the forms of leaves and flowers, and looking around and on high, sees in the majesty of the tree and verdure of the grass matter for reflection and incentives to adoration, cannot at that time entertain grovelling, unworthy ideas of men and things. This is the moral view of horticulture;—this is its value as a destroyer of the rougher feelings of our nature—a smoother of the asperities which are created by an unnatural desire for wealth and rank in this great scale of being. It is argued, at times, that the means spent in the gratification of this love of the new and beautiful of earth's offerings brings no remuneration—no return for the outlay—renders no account—is all loss and no profit, and acts at times as a great drain upon limited means. The benefits which flow from the cultivation of horticultural taste are unfortunately not evident to the superficial observer; they lie concealed in the social relations of families—are hidden beneath the surface, and produce their fruits at sundry times and in various ways.—It is sufficient for us to know that evil propensities are checked; the desire for variety so predominant in some minds directed into a harmless channel, where it may be amply satisfied; the contact with corrupt and debasing practices avoided, and the entire moral *animus* strengthened and preserved. And how differently are these results effected in this country and Europe. We are told, this month, by a keen and able observer, that horticultural taste flourishes in Europe—that it is the pastime of the matron, the maid, and the child. That there the ten hours factory toiler extends his day to two hours more, making the usual *twelve*, in order to gratify a little gardening mania that he has for large gooseberries, broad pansies, and well marked bizarres picotees and flakes; and this in England, and in Lancashire, "where pallid fingers ply the loom." And it is not as a reproach that these distinctions are drawn—he does not see at home as well as he sees abroad. We could lead our friend to corners of this fair city where he might find the same spirit exercising its influence—where Carnations of merit, and valuable Roses and choice Camellias and rare Fuchsias are tended by amateur hands, every bud of which is a source of pride to its owner which could not be valued since the enjoyment it has afforded is unbounded; and our gratification in their inspection has been little less than that of the simple-minded individuals who

in their yards have dévoted so much time and pains to the nurture of these few floral gems. We can in Philadelphia realise the *roof gardens* we have hitherto only read of. And why should it be otherwise? Have not many of the peaceful citizens who compose our population been transported here, from those very scenes where horticulture has been nursed; and can they lay aside the cherished objects because their lot is cast a few degrees west or south of their nativity? But we calculate erroneously, or America will yet be the home of gardening. We can imagine a period when naked fences will no longer meet the eye in the neighborhood of Philadelphia—when the AILANTHUS and ABELE tree will hold the position suited to their peculiar characters, and be no longer an offence to the organs of sight and smell, planted as they often are, against our windows and in our small yard gardens. We look forward to a time when there will be no lack of ornamental shrubs of the evergreen character—no difficulty in choosing a close and ornamental hedgerow. We are progressing—we must progress. A leading spirit can do much, has done much to effect this most desirable result—the decoration of the abodes of peace and contentment. One such has been snatched from us in the midst of his enthusiasm—transported from the Elysian fields he could so well paint to his own expansive imagination, we are told, to regions where all is symmetry and perfection. And when this Continent has put on a mantle of rich foliage—when the lofty Himalayas shall improve by their majesty the native landscape which claims for its portion the Laurel, Azalea, Red Cedar, Althæa, Rhododendron, Cornus, Dwarf Elder, and the multitude of flowering shrubs which have been so profusely scattered by the hand of nature. Then when eulogies and epitaphs, and even monuments will fail to tell of the mind that first taught us to decorate our homes, and to make our homes so that they would be worth decoration, it would be known by some unfailing tradition that a leading spirit had been there, for the evidences of design remain to prove the fact; and the name and memory of A. J. DOWNING will be associated with the scenes of improvement.

HORTICULTURAL SOCIETIES.

It has been found necessary, for the promotion of certain objects which would otherwise remain neglected, to form associations devoted to particular arts and sciences, where mutual assistance and anxiety are enabled to effect what individuals would fail to accomplish. Aided by means and council, steps are taken to protect and encourage, to foster and improve the certain branch of science or art, to the interests of which each society is to be devoted. Horticulture is not forgotten. As we approach the fall months we are reminded that the great feast of Flora and her friends takes place at this season; when the eyes and the

mind shall be feasted with beauty and knowledge. No spontaneous accumulation is to produce the great results anticipated; for nine months, certain places have been placarded with an immense sheet, headed "SCHEDULE OF PREMIUMS." We are sorry that our limited means do not permit us to indulge in the repetition of the various items contained in it. "And who are to receive the premiums this time?" A very out of place question; and yet that is the question commonly demanded of the cunning ones in horticulture. One says, "Oh, it is easy to tell who will get it." Certainly, we would say—"whoever merits it."

We trust, at least, this will be the result. In order to satisfy ourselves in case any competitor might consider himself aggrieved, as frequently many do, let us throw out a few hints to the competitors on this head—the judges we will not pretend to advise. Take the schedule for your guide; take it as it is—not as it should be—for better or worse; be guided by it—you made it, or you suffered your officers to make it—though right in front we see those coarse and stinking things, DAHLIAS advanced for the silver medal. Running our eye along, we see another silver medal offered, and for what? "*The Cacti*," neither more nor less. The Night Flowering, Turk's Cap, Old Man, Hedge Hog, Crab Cactus, Mammillarias, Phyllocacti. We think we see the huge masses of sap and flesh taking their stand for judgment. Following farther, we see another silver medal, for what?—oh, for a design. We shall make no comment; that is unsafe ground to tread on. Well, we hope the schedule is better than the gardeners think; though few have forty good Dahlias, many have twenty good Cacti—some specimens twelve or fourteen feet high are about. Will they be in bloom?—the schedule does not inform us. We hope all will be well; and let no one ask who made up this schedule—that is not to the purpose; why did not the members see to these things in good time? Now as to the judgment, let there be no underhand work—no tampering with judicial authority; no interference, whatsoever, in the Hall, during the presence of the judges; no whispering "that is his," or "this is mine," or "that is Tom's, or Dick's, or Harry's"—let us have a decision on the merits, irrespective of influence or authority. We have heard enough latterly of this disagreeable carking at the results—the complaints are often well grounded, and often groundless. The gentlemen no doubt do their utmost to please. How few succeed in such circumstances. Thorough acquaintance with the duties to be performed, will, we hope, place the judges far above suspicion as to skill; their character as men should be quite sufficient guarantee for the purity of their award. We are grieved to hear disrespect cast upon the men who kindly undertake the most difficult portion of the duty. We hope our friends whose honor and reputation is in their

hands, will be as forebearing as their interest will warrant. Late decisions at the monthly meetings have not given satisfaction; it can serve no purpose to conceal this fact—it is palpable, and may as well be clearly stated, and data furnished on which we cannot help coming to this conclusion. We trust a new leaf will be turned over, and that good feeling will prevail at the great feast of Flora and Pomona on the 15th, 16th, and 17th instant, at the Chinese Museum, Philadelphia.

New York follows. We know she will retrieve her character; we doubt much if Philadelphia will long bear away the palm. The means are not wanting at New York; a few spirited individuals have taken the matter in hand, and from what we know of the gentlemen who compose the committee of arrangement, we shall be much disappointed if something worthy the Empire City do not result from the preparations now making. That room in the Metropolitan Hall is too low in the ceiling; good plants will never be exhibited there to advantage. We publish the Schedule of the New York Society. We should have been pleased to have done as much for the Pennsylvania Society; but they do well to economise their funds, and let us help ourselves.

ANNUALS---SELECT LIST.

The crowd of trashy annuals which we meet with in the summer months, speaks very little for the taste or skill of the gardener. The amateur cannot be blamed—he is at the mercy of the seedsman. We shall interpose a few hints for his especial benefit, leaving the gardener to continue drawing upon his own knowledge. And taking up a list of choice flower seeds, let us glance the eye over the various claimants for public favor; lest, however, we might overlook the old standard sorts, we shall first enumerate them; they are—

Mignionette; Double Wallflower; Brompton, Giant, and ten-week stock; Phlox Drummondii in all its varieties; Schizanthus, several species; Primula sinensis; Calceolarias, Cinerarias, Pansies, China Asters, dwarf French Marygold, Chinese Pinks.

After these, try Portulacca (new white); Grammanthes gentianoides; Ipomæa Burridgii; I. limbiata, Zauschneria Californica; double Rocket Larkspur; Eucharidium grandiflorum; Papaver Marseillii; Salpiglossis, several species; Leptosiphon densiflorus; Tropœolum canariense (creeper); Eccremocarpus scaber (creeper); Lobelia gracilis, and many others, which we shall enumerate before Spring.

To secure a good show of annuals, the choice varieties should be sown in pans or boxes in September or October, and keeping them from the frost throughout the Winter, be held in readines to transplant at the first opportunity in May, or often by the latter end of April, when the season proves a propitious one. Those sown in Spring in

the open border, should be sown on a little patch of sand, or very sandy soil prepared for the purpose. Mr. Bisset, who is generally successful in this department, treats his so ; he does not make a deep hole with his finger and bury the small seeds, but scatters them thinly over this prepared spot of sand, where they seldom fail to vegetate. The sand also attracts moisture and retains it ; does not become baked into hard masses after rain, but serves as a fair medium for germination.— We hope to see many of the commonly sown annuals rejected at an early date from seed catalogues ; they only serve to confuse the amateur.

United States Agricultural Society.

☞ This newly organized Society has at length published a journal of its proceedings—a bulky affair, and presented gratis. We begin to tremble for the small practical sheets at $2 and $1 per an. which are now in competition with this formidable document. We are favored by a friend, with the perusal of No. 1., for August, of the Journal of the United States Agricultural Society; and of course look for something extra from the centre of this great Confederacy. Nothing practical is there—pardon so small a journal as ours, for sitting in judgment on the celebrities who have issued the Journal, raised as they are to a high platform which we never may reach. In fact, they may sweep us off the carpet by the power of centralization.

Pennsylvania Horticultural Society.

The report of the stated meeting of July we were obliged to curtail. Amongst the objects exhibited on that occasion, which were not enumerated last month, were a plant of Zauschneria Californica, by Wm. McIntosh, foreman to R. Buist, Rosedale ; Apples and Peaches by John Perkins ; Pears and Gooseberries from Isaac B. Baxter ; five varieties of Cherries and one of Plums, from Mrs. J. B. Smith ; and white Currants from the garden of Miss Gratz.

The President having taken the chair and the meeting being called to order, reports of committees read, &c., &c., notice of a motion was handed in by Dr. W. D. Brinklé to alter a standing by-law regulating the payment of members. A motion was offered by the same gentleman for the appointment of fifteen delegates from the Society to the Fruit Congress to meet at Philadelphia September 13th, carried. The President stated, that as he had not made himself familiar with the members, he would request two days leisure to make a selection. A report was called for from the delegation to the Agricultural Convention at Washington. Thomas Hancock, the only member of the delegation who had attended there, then in the hall, stated that he was excluded from the delegation representing Pennsylvania, being a New Jersey delegate. C. B. Rogers had presented his certificate, but made no report. Mr. Hancock informed the Society of the result of the Convention. The President requested that the Society would excuse

the members of the delegation then present, as they had heard their apology. [These delegations are mere formal proceedings—Ed.]

The meeting adjourned.

STATED MEETING, AUGUST 17, 1852.

Dr. W. D. Brinkle, V. P., in the chair. After the usual routine of business, the motion for a change in the article of the constitution relating to annual payments of members, was called and read. Thomas P. James, before the passing of the amendment, desired to record his opinion that no beneficial results would follow the proposed amendment; confusion in the treasurer's accounts would be one evil which would arise from it, and the taking advantage by new members of the privilege of free exhibition tickets at a small cost of 75 cents for three months' membership.

E. Meredith stated his opinion that the latter was not an evil to be dreaded, as few would be so mean as to avail themselves of the clause for that purpose.

Mr. Hancock and T. Parker offered some remarks, when, by Mr. Hancock's amendment on the insertion of the words *pro rata*, the amendment to the by-law was passed.

Resolutions expressive of regret at the loss of A. J. Downing, a fellow-member, were passed.

The attention of the Society was called, by R. Robinson Scott, to a by-law which provides that the committee for awarding prizes shall meet half an hour previous to the opening of the hall to the public. In explanation of the necessity of strict attention being given to this provision, he stated that the committee were embarrassed by being surrounded by visitors and competitors, and their private remarks in the fulfilment of their duty caught up, and sometimes misconstrued. He insisted that the clause should no longer remain a dead letter, as it was invariably the practice at European exhibitions to exclude from the exhibition room, during the time of making the awards, all visitors and competitors. Mr. Meredith coincided in the opinion of the necessity of sticking to the rule.

Mr. Finn offered some opposition, and said there was no necessity for any new rules.

R. R. Scott also requested to know if a selection of the delegates had been made to the Pomological Congress, for which purpose Gen. Patterson had solicited two days in the interim. The Secretary reported that they had not yet been chosen. The following prizes were awarded:

Plants in Pots.—For the best and most interesting, to Maurice Finn, gardener to John Lambert. *Bouquet Design*—For the best, to Thos. Meehan, gardener to C. Cope; for the best hand bouquet, to H. A. Dreer's foreman; for the best basket of cut flowers, and for the best basket of native flowers, to Thos. Meehan; and special premiums for five new plants to do.; and for a fine collection of cut German asters, German ten week stock, and other annuals, from H. A. Dreer's garden.

Fruit.—Grapes—For the best three bunches of a black variety (the Black Hamburg) to James Meredith, gardener to J. N. Dickson; for the second best, to A. J. Smith, gardener at Eden Hall; for the best of a white variety (the White Nice) to do; for the second best (White

Tokay) to Wm. Johns. *Nectarines*—For the best six specimens (the Newington) to Matthew Gardiner, Alex. Brown's gardener; for the second best (the Elruge) to the same. *Plums*—For the best (Reine Claude) to Mrs. J. B. Smith; for the second best (Flushing Gage) to Thos. P. James. *Pears*—For the best eight (Tyson) to Wm. Parry; for the second best (Manning's Elizabeth) to H. W. S. Cleveland.—*Apples*—For the best half peck, (Early Bough) and for the second, (the Hagloe) to John Perkins.

The fruit committee submitted an *ad interim* report of objects shown to them since last meeting.

Vegetables.—For the best display by a market gardener, to Anthony Felton, Jr.; for the best by a private gardener, to Thos. Meghran, gr. to R. Cornelius; for the second best, to Maurice Finn; and special premiums to Anthony Felton, Jr., for a display of Egg Plants, and to T. Meghran for a display of new Corn called "Stowell's evergreen sugar corn," being remarkable in size, and represented as very productive and superior for the table.

The committee also notice with pleasure, and call the attention of the Society to a new variety of Salad, called the Speckled Salad of Austria, grown from seed obtained from Vienna, and exhibited by Dr. J. Rhea Barton.

A fine bloom of the VICTORIA was exhibited, from R. Buist's houses Rosedale, foreman, Wm. McIntosh, the second successful cultivator of the renowned Lily. We have seen no notice of it in the Secretary's report in the "Bulletin"—*fair play.* A neat collection of plants were deposited by P. Mackenzie, Sch. 5th and Spruce, consisting of Fuchsias, Gloxinias, &c.

The display of Fruits was large; Grapes were in supply, many of the bunches not well colored, and some quite destitute of bloom.—Pears were almost all over-ripe. The pyramid of flowers on the centre table was well formed, and decorated with three buds of the *Cereus glauca.* The basket of flowers contained a flower, in its second stage, of the Victoria. Two baskets of indigenous flowers were exhibited (not for competition) by R. R. Scott. A new plant, Franciscea villosa, was exhibited from Caleb Cope's houses, not remarkable for anything but the character of its leaves, which differ in being soft or villous, and more oval than those of the old species. We must omit many other interesting matters. We would recommend all competitors to send their plants to the room at least one hour before the time of meeting, as the by-law must be carried out.

The following are the Delegates from Penn. Hort. Society to the American Pomological Congress:

Gen. Robert Patterson, Caleb Cope, Thomas Hancock, David Landreth, E. W. Keyser, Robert Buist, Thomas P. James, J. E. Mitchell, Peter Mackenzie, J. D. Fulton, Dr. Robert Hare, Dr. Thos. McEwen, Peter K. Gorgas, John R. Brincklé, Edw. Harris, John Perkins.

New York Horticultural Society.

At a meeting of this Society, held at Stuyvesant Institute, August 2d, 1852, after some appropriate remarks by Mr. Peter B. Mead, the following preamble and resolutions were unanimously adopted:

Whereas, This Society, by a melancholy calamity, has been sud-

denly deprived of a valuable and esteemed member; *and whereas*, It becomes our duty to pay a proper tribute to the memory of one whose services in the cause of Holticulture has given him a lasting claim to our gratitude and esteem; be it therefore

Resolved, That, in the sudden death of our late associate Andw. J. Downing, Esq., we recognize the hand of an overruling Providence, and that we deeply deplore the loss sustained by his family by his calamitous death, and hereby tender our sympathies to them in their affliction.

Resolved, That, in common with all who take pleasure in horticultural pursuits, we feel that we have sustained no common loss in the death of one so eminent in his profession, and whose labors in rural architecture and landscape gardening will remain as enduring monuments of his judgment and taste.

Resolved, That the Corresponding Secretary be requested to forward these Resolutions to Mrs. Downing; and also furnish copies for publication in the Horticultural Magazines.

We are indebted for the above to P. B. Mead, Esq., and for other useful information.

Maryland Horticultural Society.

The July Exhibition was held on the 22nd. Owing to the excessive heat, we suppose, very few visitors were present; although the display of articles was extensive and interesting,—S. Feast & Sons, kindly sent a leaf of the Victoria Regia for the inspection of the company. This measured a little over four feet in diameter.

Contributions were presented as follows:

Vegetables, S. Feast & Sons, Egg-plant and Tomatoes; Dr. Edmondson, Tomatoes and Kidney-beans; D. Lushby, Egg-plants, Tomatoes, Beets, Carrots and Cabbages; James W. Jenkins, had excellent samples of Corn, Beets, Parsnips and Carrots; J. Register, Peppers and Tomatoes; Beans from Mr. Winans; Lima-beans and Tomatoes from Nich. Popplein; Mr. Watt, gardener to President Fillmore at Washington, sent an assortment of well grown vegetables, consisting of Egg-plant, Corn, Carrots, Okra, Tomatoes and Beets.

Fruits, E. Mochler, sent seedling Plums, Apricots and Peaches;—Beautiful Early Bough-apples from J. Register; Dr. Edmondson sent a fine dish of Black Mulberries and white Currants,—Mr. Popplein, fine Apricots; splendid Currants from G. Brown, Esq., Messrs. Foise, Winans and S. Feast, each sent fine Jargonelle and Windsor Pears.

Plants and Flowers. The President of the Society contributed most liberally. He had many fine old specimens of rare plants. A seedling *Erythrina* of arboreous habit, a large branching plant twelve feet high. Many large plants of *E. Crista-galli*, Chinese Hibiscus, Dracœnia and Lophospermum, Ixoras rosea and Coccinea, Eucomus punctata, Crinum amabile; fine plant of the rare Magnolia pumila. Above twenty var. of the best Fuchsias in cultivation profuse of health and flower, Cereus grandiflorus in flower, also, Achimenes picta and Rondeletia speciosa. In addition to this valuable collection, there were many fine seedling petunias, Volkamerias, Metrosideros and Gloxinias.

In Mr. John Feast's collection were many new and valuable plants, we noted a few, as Prosthanthera violacea, Boronia anemo-

nefolia, Cyrtoceras reflexa, Adamia versicolor, Ceropegia elegans, Bouvardia triphylla Franciscea violacea, Maid of Orleans jasmine, Fourcroya Americana, Duranta cœrulea, Limonia, Gardenia Fortunii, the beautiful Evergreen Weeping Cypress of China, with many other rare evergreens. Fine collection of exotic Ferns and Lycopdiums. Specimens of Sago Palm, Agapanthus umbellatus alba, and a fine flowered collection of choice Gloxinias, cut flowers and bouquets in variety. C. U. Stobie, furnished an assortment of new fuchsias, we observed Diadem of Flora, Snowdrop, Pearl of England, Actaeon, Defiance, Psyche, Speciosa, Conciliation, &c. Fine bloomed plants of Agapanthus umbellatus, and Plumbago Rosea, several choice Roses, &c.

Messrs. Pentland, Bro., Greenmount Gardens, exhibited a variety of seedling verbenas, one named Delicatissima, has all the properties of a first rate flower; fine form, and large, both in flower and truss, flesh color, with a very distinct purple eye, a decided acquisition to this tribe of plants. Beautiful Lillium lancifolium, large Russelia juncea in fine flower. Roses in quantity, and several hand bouquets. S. Feast & Sons, had flowering plants of Crinum amabile, Nerium Tabernœmontana, Pentas carnea, Lantana mutabilis, Plumbago capensis, and Larpentæ, Gesnera, Hoya Carnosa, Gloxinias, Achimenes, and the beautiful foliaged Maranta Zebrina. A great quantity of cut flowers, hand bouquets, &c.—The leaf of the aquatic queen, before noticed, was a novelty in this quarter; the plant is expected to flower early next month.

T. Winans, Esq., sent a collection of Achimenes, and Japan Lillies, flowering plants of Torenia Asiatica, Plumbago Larpentæ, Gesnera Zebrina, Cuphea Platycentra, fuchsias, in variety, alo a pretty pot of Lycopodiun Cœsium-arboreum.

Many other contributions of flowers were on hand, very fine double Balsams from Ault & Son, and seedling verbenas and petumias from Mr. Kemp of more than *mediocre* merit, the bouquets of J. Galloway, Claremont, were much and justly admired.

W. SAUNDERS,

PLATE VII.—1. GLADIOLUS, Fanny Rouget; 2. M. Couder; 3. M. Georgeon.

A group of three newly introduced Gladioli, hybrids; imported by H. Farnum, Esq., and drawn by a young lady at the School of Design.

TO CORRESPONDENTS.

F. W. C.'s communication, Dublin, has been unavoidably left over; also, that of "Vitator." The reply to "Maythorn" we will not publish; let him go ahead, slime and all. Dr. Warder, of the "Western Review," says, "We set out with the determination to fight with no one." We now endorse it; ours is not a warlike occupation. "J.B." enquires who are our committee. We have none now; we did not feel disposed to have them attacked, so we disbanded them, and take all the responsibility of management—but they work harder now for us than before.

We thank "S. W. M.," Columbia, for his list of subscribers; also, Wm. Saunders, and John Graham. Col. O'Brien has done well, in Mass. Swell it up now, and we shall do our best.

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NOTES ON THE CACTI.

No. II.

Epiphyllum truncatum and its varieties make nice small flowering plants in one year from cuttings; if good sized shoots are taken off early in the Spring, and as soon as they are struck, shifted into four inch pots and grown smartly through the Summer, water withheld gradually and the shoots thoroughly ripened in Autumn, they will flower well the following year.

The grafting of Cacti is easily performed; but in carrying it into practice, some very unnatural looking vegetable monsters have been produced. We have seen a large mass of Epiphyllum truncatum three feet in diameter, growing on the top of a wiry stem of *Pereskia* not one inch thick, propped up and supported in every possible manner. It must, however, be confessed, that they flower very well in this fashion, frequently blooming two or three times in one season, owing, no doubt, to the small amount of nutriment that the stock is capable of transmitting to the succulent leaves of the graft, causing the formation of flower instead of leaf buds. The free growing Cerei, such as *C. speciocissimus*, and *C. hexagonus* are better adapted for stocks. The EPIPHYLLA, when grafted on these, become hardy greenhouse plants, and the flowers are larger and superior to those grown on their own roots.

Cuttings of either of the above mentioned CEREI should be rooted and grown with a single stem. When they reach the desired height, cut off the top horizontally, and prepare the graft by paring off half an inch of the bark at the base, and cutting it in the shape of a wedge. With a knife or sharp pointed bit of wood, make an incision on the top of the stock, fit in the graft, and secure it with a wooden peg (or spine) run through both stock and scion; tie a small piece of damp

moss round it, and the operation is complete. Large specimens may soon be obtained by cutting down an old plant to two or more upright stems, and inserting a number of grafts from the surface of the soil to the top of the stock in the angles of the stems, securing them as before mentioned. Place them in a warm temperature, well shaded; syringe them frequently, and in ten days or a fortnight they will be firmly united; after they have grown a little they will require more air, and to be treated the same as the others.

The treatment of all the genera of Cactaceæ is the same; they require to be kept dry in winter; in early spring they must be brought forward and watered, they then flower, and immediately after,—which is very inconvenient, for it spoils the bloom, they commence growing. They should be grown as rapidly as possible in a shaded house, giving plenty of water, and once a week a good application of manure water; towards the end of July or in August they should be turned out of doors, where the sun and air will ripen the young shoots. Gradually diminish the supply of water, and cease it altogether or nearly so, in winter. The best soil for *Cereus*, *Phyllocactus* and *Epiphyllum* is a mixture of equal parts loam, leaf mould and sharp sand; these should not be left so dry as to shrivel, as it often necessitates the cutting away of the best part of the plant. The round kinds do not require so rich a soil, and they will bear drought much better; they should be wintered, if possible, on a dry shelf near the glass, where they will have all the light and air possible, and away from heat and moisture, which would prevent their enjoying that rest which induces successful flowering in the spring.

We shall return to the subject when we find more materials for observation.

CULTURE OF ACHIMENES.

BY THOMAS MEEHAN.

The genus *Achimenes* is now so well known for its beauties, and for its interest, that nothing need be said of it here. It will be in the recollection of most gardeners when it consisted of only a single species the *Cyrilla pulchella* of L'Heritier. In consequence of that name having been already given by Linnæus to a genus of North American plants, it was changed by Willdenow to *Triverana coccinea*, and was subsequently named *Achimenes* by Patrick Browne. Within the last ten years the number of species and varieties increased from one to near fifty, all of which are beautiful ornaments to the hothouse and greenhouse. They can be grown to the greatest perfection in a moist warm atmosphere, partially shaded, in a soil composed of equal parts broken charcoal, leaf mould and sand, and when growing can scarcely

receive too much water. To have fine specimens of single plants, they may be pinched in occasionally. I have had a single plant of A. peduncularis by this system three feet high and two feet in diameter. Where there is not the convenience of a moist stove, they will do well in a greenhouse. As soon as the flowers show signs of ceasing to be produced, water may be gradually withheld till the shoots die down, when the pots may be stored away till the next spring in any dry place secure from frost. To be brought forth in early spring, shake the bulbs or scaly roots out of the old soil, rejecting those too weak to form flowering specimens, and repot in the compost recommended. Many gardeners prefer using a large proportion of rich loamy soil, and have produced fine specimens, with a profusion of bloom in pans. For the information of amateurs, a list of choice Achimenes is added:

Achimenes—longiflora, alba; major; grandiflora; pedunculata; picta; hirsuta; patens; pyropœa; ocellata; Skinnerii; Hillii Kewensis; gloxiniæflora.

Window and Yard Gardening.

Mr. Editor: — To show the interest I take in the welfare of the "Florist," and in the diffusion of gardening knowledge, I undertake, at your request, to furnish a few monthly hints on the above subjects. I do so, however, with much diffidence, being confident that I can acquit myself better with a spade than a pen in hand. I also doubt whether I will be able to suggest an idea that would improve many of the floral pets to be seen in out-of-the-way corners in this city. I occasionally get a glimpse of *specimens* that would be an ornament, if not a model, to some of the best collections of plants; but if my remarks be the means of making *one* long-legged geranium assume a more compact and pleasing aspect—or assist in bringing *one* wo-begone orange tree into a thrifty state, I will consider myself amply repaid for the trouble of writing them.

It cannot be expected, that in writing such monthly notices a detailed account of the entire management of every plant incidently alluded to can be given. The more important point, perhaps, is to explain the physiological principles on which the health of plants depends; therefore my remarks will in the main assume more of a general than special character.

Oleanders, Myrtles, Pomegranates, Orange and Lemon trees that are quartered in cellars during winter, should now be under preparation for the change—that is, they should be gradually hardened by receiving a less amount of water. Do not suppose by this that you are to "*dribble*" a decreasing quantity every day on the surface of the soil—

if you have been practising this *dribbling* system daily on your plants all summer, they will look miserable enough. Before you water any plant, satisfy yourself in the first place that it actually requires it; examine the soil, and if it is dry, give a good soaking. Let it be dry again before you give it any more—never mind although a week or ten days intervene between the waterings; as long as it is wet it requires no water.

Geraniums.—If you have not already done so, you should lose no time in pruning away all of this year's growth, except two or three buds at the base. If they have long bare stems, cut them down to within six or eight inches of the pot; do not give them much water until you perceive symptoms of a young growth. This should have been done several weeks ago, but it is better to do it now than leave it undone altogether.

Roses.—If you have a moderate sized rose bush in your flower bed, and would like a few blooms in your parlor window about Christmas, take it up carefully and put it in a pot; give it a good watering and set it in a shaded place for a week or two. If it wilts much, prune back some of the strongest shoots and cut out the weak ones. Should you purchase a few plants for this purpose, prefer either of the following—Mrs. Bosanquet, Agrippina, Hermosa, and Souvenir de la Malmaison.

Bulbous roots of Hyacinths, Narcissus, Crocus, &c., for the windows, should now be procured and potted. Let the pots be well drained; an oyster shell at the bottom, with a handful of charcoal at top, is as good for this purpose as anything. A little charcoal mixed in all your potting soil will be highly advantageous to the plants—it prevents it from getting hard, and lets in the air to the roots. After poting your bulbs place them in a quiet corner, and cover up the pots with ten or twelve inches of coal ashes or common soil, cover it with a few boards to keep off heavy rains. Let them remain so for six or seven weeks; if you then turn one of them out, you will be delighted with the potful of roots it has made. If you grow these bulbs in glasses of water, take care that the water merely reaches to the bottom of the bulb; keep them in the dark until they have made some roots—dark colored glasses are always to be preferred.

General Remarks.—You need not trouble yourself about procuring a variety of soils for different kinds of plants. Get a quantity of tough turfy sods, and lay them in a pile with the grassy side down; when you desire to use it, chop it up with a spade, (not too finely,) and mix about one-fourth of sand and charcoal dust with it. With proper care in draining pots well, you will find all your plants grow thrifty and flower abundantly in this soil. Chrysanthemums will soon be in flower now; keep them neatly staked up; use as small stakes as

possible, and keep them hid—when the stake is more conspicuous than the plant, it takes much from the beauty of the latter. Order and neatness are characteristic of a well regulated mind; and as there are few persons who do not derive a certain amount of enjoyment even from the appearance of order, regularity and good management, so by practising these virtues you will have the additional satisfaction of extending pleasure to others as well as yourself. D. D.

☞ The increasing demand for information in the department of Window Gardening, renders the communication of "D. D." very acceptable. We hope he will continue to furnish timely hints on the subject.

FOREIGN GRAPES.

DESCRIPTIVE LIST.

Prepared for the Philadelphia Florist, by James Powell.

No. 25. Muscat, Cannon Hall.—Young wood reddish green, smooth; foliage large, dark green; lobes deep, deeply serrated; footstalk long, rather thick, of a red hue; bunch long, berries large loosely set on the bunches, oval, white, skin rather thick, musky flavor, but not so high as the Muscat of Alexandria.

With respect to this grape, it must be admitted that gardeners fail to procure a well-set crop in this climate. We have seen miserable bunches with a few large berries on one side, just enough to show how desirable it would be to have a finely set bunch; but as yet we have not seen it—it seems to require a warm situation in the house.

26. Muscat of Alexandria, *Tottenham Park, White Malaga.* Young wood bluish green; foliage large and strong, of dark green hue, with deep lobes, deeply serrated margins, long footstalk, of a purplish crimson color; bunches long, large shouldered; berries large, oval, yellowish white, thinly set on the bunches—a grape with a high musky flavor, suitable for planting in the warmest part of the house.

27. Muscat, Blanche Hative.—Young wood brownish green; foliage large, when growing strong of a dark green color; lobes not deep, broadly serrated, rather recurved; footstalk rather long, pink; bunches good size, rather compact, often with small shoulders; berries closely set on the bunches, globular; short footstalk, of a yellowish-white color; thin skin, covered with a thin white bloom, with a very pleasant musky flavor—an early grape, and a very free bearer, fruits well in pots.

28. Muscat, Austrian. — Young wood reddish green; foliage strong; lobes not deep, rather broadly serrated, smooth; bunches long, loose, large shoulders; berries oval, dull yellow, thick skin, slight musky flavor, but flat—an indifferent grape.

29. Miller's Burgundy.—Foliage small, lobes not deep, covered on both sides, especially in the spring, with a cottony substance, which in the young state is almost white; bunches short and thick; berries

small, round, black, equal in size, very closely set on the bunch, of a sweet, rich flavor—a hardy grape.

30. Maurillon, *Early Jura Maurillon.*—Young wood green; foliage small, erect, lobes not deep, very rough on the underside; footstalk short, smooth, with a reddish tinge; bunch compact, small shoulders; berries round, medium size; short, stiff footstalks; black thick skin with a thin blue bloom, sweet, with a slight acid taste—a very early grape.

31. Madeline, *Early Black July, Maurillon Hative.*—Bunch compact, berries round, medium size, black, thick skin, with a sweet, pleasant flavor—second quality, but one of the earliest grapes.

32. Purple Damask.—Young wood green, slightly tinged with red, downy; foliage dark green, strong deep lobes, broadly serrated, downy underneath; footstalk long, reddish; bunches large, with small shoulders; berries very large, oval, thickly set on the bunches with long footstalks of a dark purple approaching to black, covered with a thick blue bloom; rather thick skin, sweet saccharine flavor—sets free, and a great bearer.

33. Partridge Foot.—Foliage dark green, very rough, downy on both sides; lobes deep, footstalk long, green; bunch of medium size, with small shoulders; berries thickly set on the bunches, uneven in size, round, with stiff footstalk; skin thick, of a dark purple or black color, flavor sweet and pleasant, with a slight acid taste—a great bearer.

34. St. Peter's, Black, *St. Peter's Black Palestine.*—Young wood reddish, smooth; foliage large, five-lobed, broadly serrated, pubescent on the underside, dark green, with purple blotches before falling; footstalk long, of a purplish hue; bunch long, generally without shoulders; berries of a good size, globular, thickly set on the bunch, skin thin of a black color; flesh delicate, very excellent and well flavored, rather late; the berries are very apt to crack if subjected to a high temperature.

35. St. Peter's, Oldacker's.—Young wood green, quite smooth foliage, generally almost entire, rather broadly serrated, having long reddish footstalks covered with short stiff hairs; bunch large shouldered; berries black, round, with thin skin, delicate sweet flavor. A very excellent grape, and if in a dry house will hang on the vines till March.

36. Raisin de Carmes.—Young wood green, smooth; foliage dark green, downy on the underside; lobes deep, recurved; footstalks green, rather short, thick, pubescent; bunch long and of good size; berries large, roundish oval, of a purple color with thick skin, of a sweet flavor. A very excellent grape.

37. Sweet Water.—Young wood green and smooth; foliage rather large, often deeply lobed, penduluos, recurved; footstalks long, smooth, of a pink hue on the underside; wood short-jointed; bunch medium size; berries large, round, of a white color, and when fully ripe and exposed to the sun, shaded with a light brown; very saccharine and rich flavor, sometimes sets partially—a well known grape.

38. Syrian.—Young wood green, smooth; foliage large, lobes not deep, broadly serrated; footstalk long, smooth, tinged with pink, with brownish blotches; bunch large, regularly formed, with broad shoulders; berries large, of an oval form, white, flesh firm, and if well ripen-

ed of a pretty good flavor; an excellent bearer, will hang a long time on the vines after being ripe. Bunches of this grape have been grown to an immense size; Lindley mentions one that was grown at Welbeck by Mr. Speechley, that measured 19 inches across the shoulders, its length 21 inches, and circumference 4½ feet, and weight 19½ lbs., supposed by some to be the variety of grape mentioned in the Old Testament.

39. Scharge's Henling.—Young wood green, smooth; fol. large, lobes not deep, irregularly serrated, the underside of the leaves covered with a thin, white, cottony down; footstalks long, thick, of a purple color, slightly downy; bunch medium size, compact; berries rather small, dark purple, inclining to oval form, of a sweet and pleasant flavor. A great bearer, and well adapted for pot culture.

40. Victoria. Young wood green, smooth; foliage dark green, large, of a thin texture, lobes pretty deep, broadly serrated; footstalk rather short, green, with brown blotches; bunch medium size, with short shoulders, rather longer than the Black Hamburg, which it very much resembles; berries good size, inclining to oval, of a deep purple color when fully ripe.

41. White Bual. Young wood green, slightly downy; foliage dark green, five lobed, recurved, broadly serrated, the underside covered with a thin white down; footstalk long, downy, green, with a few pink stripes on the underside; bunch compact, large shoulders, berries obovate, greenish white, skin thick, flesh firm and sweet.

42. White Portugal, *White Hamburg*, *White Lisbon*, *White Raisin*.—Young wood dark green; foliage dark green, large, of a reddish hue when young; lobes not deep, broadly serrated; footstalk long; bunch large, loosely formed; berries large, oval, with thick skin, of a greenish white color, flesh hard, but of a pleasant sweet flavor; it will keep a long time after it is ripe. Large quantities of this grape are annually exported from Portugal to different countries, and is the Portugal grape of the stores. The value of those sent to London alone is estimated at $50,000.

43. Zante, *Black Corinth*.—Young wood purple, downy; foliage dark green, lobes not deep, broadly serrated, downy on the underside; footstalk long, dark purple, covered with a whitish down; bunches small, but long in proportion to the size, with small handsome shoulders; berries small, about the size of the red currant, of a deep purple color and a sweet saccharine flavor; it forms a very handsome bunch. This grape is the well known *currant* or Corinth of the stores, and is exported from the Ionian Isles to the extent of 6000 tons annually.

☞ The cultivation of Foreign Grapes is beginning to attract much attention in this country. Many fine graperies are now in course of construction, and much interest is manifested in the matter by amateurs. In the neighborhood of Philadelphia, fine specimens of Black Hamburg, Syrian, White Frontignan, Grizzly Frontignan, and many others are produced. Skill is necessary on the part of the gardener to ensure success; but possessed of this, there is no obstacle to the unlimited cultivation of this desirable fruit, which would certainly prove a remunerative crop in skilful hands.

On Renovating Old Specimens of Plants.

BY T. JOHNSON, PHILADA. COUNTY.

I frequently meet with old specimens of orange trees in my wanderings, the owners of which would "do anything" to "bring them round again." There are also many who have plants, which have been shifted from pot to pot till the plants have grown too large for their situations; while there are again other plants which have been grown with the view of obtaining a fine bloom, which must either be thrown away or renewed. I will show the manner of proceeding in such cases. Orange and many other similar trees become sickly through a superabundance of water in the winter season, joined to a defective drainage. To effect a good change early in spring the plant should be cut in considerably, and no more water given than is absolutely necessary to preserve the leaves from shrivelling. In about three weeks have a preparation ready of half rotten turfy loam, and about one third road sand—shake out the plants from the old pots or tubs, wash the roots, cut out the decayed roots, and shorten the long ones, then select a pot just large enough to hold the roots easily, and pot in the compost prepared—water well, and, if there be the convenience of a moist heat, place them in it for a few weeks; if not, place them in a shady situation out of doors, and give them water only when they appear about to become dry. When it is desired to reduce the size of a large specimen, see that the wood is well ripened before pruning it. If it has been grown in doors, set it out in an airy situation, but shaded from the full rays of the sun, and lessen the supply of moisture. This will soon ripen the wood, which will be known by the stems being considerably deeper colored, and appearing much firmer; then cut down to about a foot or six inches of the ground, as may be desired. Still keep it rather dry—when it has pushed forth shoots half an inch in length, shake out the plant from the old soil, prune in the roots, and replace in as small pots as desirable, in a rather poor but light soil—the nature of which must vary to suit each given plant. This treatment will be successful in most cases. The only difficulty I have ever found has been with heaths and some other hard wooded plants, but with the wood of the old specimen perfectly ripened they also *break* well, when cut down in the above manner. In the case of plants which have to be cut down to flower again the next season as the geranium, the fuchsia, and the like, treat as recommended for the last, but be careful that the plants are shifted out into larger pots before the roots become cramped in the smaller ones.

I have now redeemed my promise as to window plants. I shall be delighted if any effort of mine aid your really essential work. I conceive it to have a claim on the amateur, the gardener, and the trade generally. It serves to bind each class of Horticulturists the more to the other, by bringing together the stock both of knowledge and of novelties which each individually possesses.

On the Accumulation of the Sap in Plants.

"Raw, crude sap, kept in readiness by the plant to supply the great extra evaporation, consequent on the bursting of the buds. *'Kept in readiness'*—this is something new. Where was it kept?—and what kind of a reservoir had the plant to keep it in? We have never found anything of the kind in plants. Does not the sap as collected by the roots ascend immediately to the leaves to be elaborated?—cut off the roots and you will soon see there is no stock 'kept in readiness.' "

Mr. Editor:—In the July No, you published an essay of mine "On the bleeding of trees from pruning." That paper has been copied into a portion of the American press, and received the approbation of many acute observers. One journal however, disputes—*not the accuracy of the experiments*,—but merely the *reasons* which I presumed to offer in explanation of them. If my *theory* is not correct, the *practice* was on which it rests. If he is not satisfied with my deductions, I would thank him to give better ones. The theory is not so very material when the practice is correct.

In the course of his remarks, he uses the observations I have extracted above. It has occurred to me that a short essay on the accumulation of sap during the plant's season of rest might interest "The Florist."

Most have observed, that very little moisture exudes at the place of excision of a branch severed just after the fall of the leaf. Later in the season there is more, and early in the spring the shoot becomes full of sap, and "bleeds" profusely when cut. This fact bears on the inquiry "Does not the sap proceed immediately to the leaves?" In answering that it does not, let us understand *why*. After the fall of the leaf, trees are not, by any means, *completely* at rest. The roots continue to collect sap at all times, unless encased by accidental circumstances—such as frost. The vesicles of the softer part of plants (cellular tissue) are elastic—they are capable of contraction and expansion.

After the fall of the leaf, the collected sap is stored in these vesicles. This is a beautiful provision of nature,—enabling the plant to continue its sap collecting processes—making these cells, as it were, countless *reservoirs* of enervating fluid, ready for the active demand for carrying on her busy spring operations. The accumulation of sap in these reservoirs during the winter is sometimes very great. Dr. Neuffer states, that at Turbingen in Wirtemberg, or in about latitude 48°, nearly all the trees contained eight per cent, more aqueous fluid in March than at the end of January. It is pretty evident there must be some considerable "reservoirs" somewhere in plants; notwithstanding that my friend "did look, but did'nt see anything."

We are told with a "clencher" to "cut the roots, and you will soon see there is no stock *kept in readiness*." I have met with very few men who have not seen trunks of trees felled in winter produce some pretty good shoots from them the following spring. I have seen

shoots 18 inches long on the English elm, two successive years after being felled, and 12 inches on the ash and oak—and in 1850 I saw large poles of ailanthus standing *on end* against a south wall with shoots six, eight, ten, and twelve inches long, and plenty of them. They had to find out the *reservoirs* where the sap was *kept in readiness*, when their "roots were cut off."

In concluding allow me to point out a small tithe of the advantages of a more extended study of vegetable Physiology. To young gardeners it is invaluable, leading them to a knowledge of the principles on which their practice rests, the reasons why their operations are in their various ways conducted, and thus opening the way to all kinds of improvements benefitting themselves and their cause. To the amateur or patron, and the lover of nature, it unfolds innumerable sources of the purest mental enjoyment—while to the general philosopher, it may often afford the material for many useful discoveries, fraught with advantage to natural science in its various branches and consequently to the human race.

Thomas Meehan.

Aspects of Agriculture in Great Britain.

BY F. W. CONNOR, DUBLIN.

I promised to write you a few notes from time to time on the state of agriculture with us, as no doubt it is a matter of some importance to your readers to know how we manage to keep afloat with high rents and a potato disease still continuing. Since my last the general elections changed but little the aspect of parties as regards the principle of protection. The country failed to reverse its former testimony to any extent, leaving the protectionist party in almost as unsettled a position as they occupied previous to the appeal to the country. Strong feelings were evidently evinced by both parties not at all creditable to the usual coolness of John Bull. The most important feature is the successful issue of the harvest which after all is of more moment than all their electioneering contests. Flax and green crops generally have had a propitious season, but the unfortunate potato has again failed to a great extent. The disease having returned in its most virulent form, carried off more than half the crop. For some time past and indeed we may say for the future, potato culture may be considered as nothing less than gambling—as the result is almost as uncertain.

The meetings of the several Agricultural societies have been productive of much renewed interest. At one meeting at Lewes, in Sussex 44 prizes were given for implements, varying from $20 to $200. Drilling and threshing machines attracted a large share of attention. Some of the latter of from 2 to 8 horse power were exhibited. Much improvement has been effected in the breed of pigs, both in the large and small kind. We are becoming quite connoisseurs in our regards for this section of the farm animals, and the effects are already visible. Indeed we are becoming quite a pork consuming people. In the poultry line beautiful specimens of the

Dorking and Cochin China were produced and as young fat fowls draw from $1 to $1,50 each, there is some interest exhibited in their management. Geese were shewn 14 weeks old that weighed 40 lbs. I hope this will excite American housewives.

The Royal Society offers a prize of 50 sovereigns about $250 for the best account of the geographical distribution of guano, with suggestions for the discovery of any new supply accompanied by specimens. The essay to be forwarded by the 1st March, 1854—probably some of your go-a-head men may enter the lists. I am not aware of any other nation likely to be so well informed on the subject. There is little new in the scientific world except the discovery by Dr. Wilson, of Edinburgh of the presence of Fluorine in sensible quantities in siliceous plants, particularly those of the order Equisetaceæ and Graminaceæ—the subject is still under investigation.

You have no doubt been informed of the sensation created by the Rev. Mr. Smyth, of Towcester in growing wheat. He has taken a crop of wheat off a four acre field for the last seven years successively without the application of manure, and the produce of grain instead of diminishing has actually increased from 17 to 40 bushels of 61lbs. He sows one peck (8 quarts) of seed per acre, dibbled in triple rows one foot asunder, the intervals between each triple row being three feet. He sows in September, trenches his three feet space in November when the wheat is green and labor abundant and cheap. A few inches of the sub-soil is brought up to be ameliorated by exposure to the winter's frost, &c. He hoes also the foot space in the spring, until the luxuriance of the crop excludes farther operations. The three feet space which had been trenched is sown the following year in triple rows with wheat. Thus half the land is only under the crop each year, receiving at the same time all the advantage of summer fallowing, perfect comminution, aeration and cleaning of the soil which conduces to its fertility. The changes published by M. Fabre in the *Ægilops ovata* to true wheat has also attracted considerable attention. Finding a tendency in this grass to sport, he sowed the seed successively until from its hungry, miserable state it became transformed into a plump grain, its quantity of flour increased, its size augmented, and a sample of wheat produced equal to that of the neighboring farms. This was no laboratory experiment—it was carried out on a large scale in the open field. It has no doubt given rise to many speculations and affords a proof of the tendency in plants to transformation by culture.

CURIOSITIES OF VEGETATION,

(Concluded from page 60.)

Amongst the 92,000 species of plants known to botanists, according to Lindley in his vegetable kingdom, there are many remarkable natural productions, a description of which, with their uses and peculiarities would no doubt prove interesting to many readers who have not sufficient botanical taste to induce them to search for details in extensive works on the subject. In the lowest forms of organised vegetables we find striking peculiarities of structure and composition. Amongst sea weeds, and fungi or mushrooms there are many individuals useful in domestic economy. Several are used as articles of food—and the value and importance of sea wrack in the manufacture of Barilla, is known to all who have visited the shores of those coun-

tries where its manufacture forms an important portion of the staple occupation of the inhabitants. The value of sea weed as a manure is also well known, and on most of the shores washed by the sea where it is deposited, it makes up a portion of the actual value of the adjoining farms. Another sort of sea weed called *sloke* is used as food in times of scarcity, being boiled like any other vegetable. Some of the fresh water Algæ are so minute as to be scarcely distinguished by the naked eye in the water, and in one instance so abundant is a peculiar species in a fresh water lake as to give a green tint to the entire water, and it is named from that circumstance *Glasslough*, or Green lake. The green Algæ is minutely distributed through the water. Amongst mushrooms much attention is paid to the cultivation of several sorts. The eatable mushroom *Agaricus campestris* is universally sought after and valued in cookery, and is successfully cultivated from spawn prepared by the gardener. Another species is much used in Kamschatka by the peasants to produce intoxication and pleasant sensations akin to those produced by opium. It is called *Amanita muscaria*, its effects on the nervous system are very remarkable. Another very curious form is the *Sphæria Robertsii*, a fungus growing from the head of a caterpillar from sporules inhaled by it until the animal is destroyed by the growth of the fungus. The Ergot of rye is another familiar instance of a species of fungus very destructive to one of our most useful cereal crops, and which has occupied the attention of scientific men from time to time in enquiries as to its progress in its attacks on the grain of the husbandman. But although much attention is drawn by these inferior objects of the vegetable kingdom, much more is given to those peculiar forms which arrest the attention by their size and form, their beauty and fragrance. Many plants produce poisons of the most acrid nature, which can be so modified by cooking as to become harmless and even nutritious. The Tapioca plant or cassava, *Munihot utillissima*, or *Jatropha Manihot* is furnished with an acrid juice of the most poisonous quality, which if even allowed to enter the flesh causes excessive irritation and sometimes mortification; yet this plant can be converted into a useful and delicate article of food. The natural order to which it belongs is well known for its dangerous properties—all the individuals composing it are furnished with a milky juice which conveys some suspicion of their poisonous nature. An individual of this order called the sand box tree, *Hura crepitans*, is peculiar from the fact that the ripe fruit bursts suddenly, emitting a kind of dust—the juice of the plant is quite fatal when taken internally. This as well as the Tapioca plant is a native of the forests of South America. The Manchineel is also famous for its deadly properties—it is supposed that persons have died merely from sleeping beneath it. It is a matter of certainty however, that its juice burns intensely the skin on which it may fall; it is called by botanists *Hippomane mancinella*. In this suspicious order of Euphorbias is also found the *Euphorbia caput Medusa*, or Medusa's head, so called from the resemblance of its branching head to the fabled Medusa, it is not however quite as prolific as that monster. The tree from which the bottle India Rubber, is procured is also found in this section (*Siphonia elastica.*) The bottles are procured by smearing over repeatedly with the juice, clay moulds of the form desired, the action of the atmosphere inspissates the juice. This tree is familiar to most persons in this neighborhood as the gum tree. The Croton from which the celebrated purgative

oil is procured, is also found in this remarkable group, which is composed of some of the most insignificant weeds of temperate climates, and at the same time the most important and dangerous of tropical trees.

Slight reference can only be made to the variety of uses to which the various products of Palms are applied in the human economy. From the well known cocoa nut (*cocos nucifera*), the fruit of which is generally diffused over the civilized world, to the cabbage palm, so useful in some localities as an article of food. We meet with the vegetable ivory *Phytelephas macrocarpa*, whose nuts yield a substance almost equal in durability to the ivory procured from the elephant, and with the advantage of being very abundant. These nuts are now converted into all kinds of ornaments and devices not easily distinguishable from the original article when manufactured. The living plant forms a beautiful object for the conservatory, but as yet is not generally distributed amongst cultivators. The date palm is well known as the plant which yields in abundance the date of our shops, and is of vast importance to the Arab of the desert as an article of food. Specimens of this palm are quite common in all extensive collections, and are to be met with in those of this neighborhood. The wax palm *Ceroxylon andicola*, attains a height of 180 feet, and produces a kind of wax which forms a coating to the trunk, it exudes from the point of insertion of the leaves. This palm is also in many collections, at least in Europe. The doom palm of Egypt is another remarkable individual of this order, (*Hyphene thebaica*), used also as an article of food. It has been found very difficult to procure living plants of this species—a valuable description of rope is made from its fibres. The Betel nut is still another remarkable natural production of the palm tribe, peculiar for its narcotic properties procured from the Areca catechu. But only a tithe of the curiosities of palms can be mentioned here. Even from one individual species in its different stages of growth and development are produced food, drink, clothing, cordage, covering for tents, oars, baskets, buckets, cradles, material for torches, and a substitute for writing paper, with oil for lamps, and many other less important articles of domestic economy. The grandeur of their forms is not a matter to be lost sight of—they elevate our ideas of the Creator when we survey these mighty offsprings of the soil on which we tread.

And turning to the more familiar habitants of our own climate, there are thousands of objects worthy much minute attention, but which are too often overlooked. The great diversity of character in the gourd tribe or CUCURBITACEÆ, must have often been a matter of reflection to even casual observers. The melon, cucumber, and squash in all their numerous varieties are worthy of note. The small gherkin, and balsam apple, and the curious squirting cucumber (Momordica elaterium,) are but approximations to the mammoth pompion, which astonishes us by its rapid growth, passing over the various intermediate forms of crook necked, turban and bush squashes. A species of Convolvulus closely allied to the morning glory of our arbors, gives us a useful root the sweet potato (Convolvulus Batatas.) And the old and more generally cultivated potato is related to as curious a family, when we take into account the diversity of character observable in the solanum tribe; which also contains our familiar friend the tomato, *Solanum lycopersicum*; and the egg plant, *Solanum melongena*.

When we contrast the difference that exists between the size of the leaf of the great palms, perhaps the most striking form of leaf is that of the floating Victoria lily—now so well known, with the minute duck weed (*Lemna*) of the marshes ; or the still less developed forms of Dodder (*cuscuta*), which has no true leaves ; and the Orobanches or broom rapes, which rise up from the soil destitute of leafy beauty—the tooth wort and beech drops, and bird's nest or *monotropa*, so unique in appearance furnished with perfect flowers and seeds, but no true leaves ; we must certainly admit that there is in the products of nature a vast and endless variety of forms curious and interesting to the casual observer if brought in a proper manner beneath his notice. Peculiar forms are adapted to peculiar localities. Orchids resembling in form, flies and moths, hang to the bark of trees in the tropics. Others similar in the shape of their flowers but different in most other points are found growing in the soil in temperate countries, and quite dissimilar vegetable productions in different countries serve a similar purpose in the economy of nature. The value of a more extensive acquaintance with the products of the vegetable kingdom will it is hoped soon be universally acknowledged, and the forms which now are matters of curiosity to many will become familiar, at least so much so as description and history can make them to the general reader. The walk in the country is so much more interesting when the objects are familiar which spring up around the feet, and the satisfaction at the sight of some fine specimen more lasting when its history is known.

The foregoing remarks are intended to excite a desire to know more of the productions of the vast field which is spread around us.

Cultivation and Propagation of Green House Azaleas.

BY F. N., NEW YORK.

The varieties of Azalea Indica now in cultivation are very numerous and many of them strikingly beautiful. I shall not now attempt to enumerate them, but offer a few remarks on their propagation and culture which may prove interesting to the amateur. I have succeeded best in propagating them in July, when their wood is about half ripened. I use cutting pots or pans, filled about half way up with broken potsherds over which a small quantity of rough vegetable soil should be placed, to prevent the fine mould from mixing with the drainage. Fill the pots with a mixture of two thirds peat and one third sand, sifted so as to clear it of all lumps, to within half an inch of the rim. After pressing the soil lightly with a small pot or circular board made for the purpose ; cover with fine bar sand, and after sprinkling it with a fine rose watering pot, to settle it, insert the cuttings, prepared to a length of about two inches. After the cuttings are put in, they should be covered with a bell glass to prevent evaporation, and the pot plunged in a bed with a slight bottom heat, and at a temperature of 65 or 70°. In the course of two months they should be rooted, when they will require a little air, which may be given by tilting up the glass on one side, In one or two weeks they may be removed to the greenhouse to remain till the latter end of February or the beginning of March, when they will require repotting into two inch pots in a mixture of peat and sand—they may then be placed in a hot-bed at a temperature of about 60° for four or five weeks and afterwards removed to the front of a warm house for

some time. Towards the middle of May they will require fresh potting into four inch pots in the same compost as before, pressing the soil firmly round the ball of the plant in potting. They should be afterwards removed to a cold pit or frame, and kept close for two weeks or more. and well shaded from the burning rays of the sun until well established, when air and light may by degrees be admitted. Look over them carefully at intervals and stop all those luxuriant shoots that will bear it. The plants will be much benefitted by being carefully shaded during the severe summer sun until their growth is established. Give all the light and air possible in order to secure vigor and healthy appearance, and to ensure the ripening of their wood. They may remain without repotting till the following spring, when they must be shifted as the vigor of the plant may warrant. About the end of June if they have flourished, they will be assisted by another shift. and will still continue to increase in size if properly attended to, as frequent shifting is found to be the most secure method of treatment and less dangerous in the hands of unskilful cultivators. The following spring will produce fine young plants in a fit state for flowering in six inch pots. As they increase in age, a freer state of bloom is secured by adding a portion of loam to the compost, making one part of loam to one of peat, with a little sand to preserve the porosity of the soil. They may be induced to flower earlier than usual by a little forcing, if that can conveniently be managed, or they may at least be kept in a warm part of the green house.

Hardy Plants in North Carolina.

A correspondent from Fayetteville, N. C., furnishes a few notes of plants which have withstood the winter in his neighborhood without protection. Amongst these were Oxalis Bowii, Hedychium flavum, Alstræmerias ; Pittosporum tobira, Escallonia rubra, Chinese azaleas, single camellias, Aucuba japonica. They had a shady situation and the soil was well drained. Severals were partially protected by putting a few inches of charcoal dust over them such as Manettia cordifolia, Bouvardia triphylla, Erythrina Crista Galli, several species of Amaryllis, Agapanthus umbellatus and Calla Æthiopica.

Knight's double flowering Brugmansia was however cut down last October, although covered with 16 inches of charcoal. It is now quite vigorous, and has been in bloom since the 15th August, and is 6 feet high. *Metrosideros sempervirens*, the Cape jasmine and *Olea fragrans* stand mild winters, but during hard frost it is necessary to place a box or barrel over them. I have come to the conclusion that plants intended to remain out all winter should be set out in spring, that the roots may have time to get established. The chance of success is increased by having the soil well drained and sufficiently rich to ensure the mature growth and health of the plant in order to ripen its wood. I was however, unsuccessful with a few which I risked without protectiou, such as Viburnum tinus (Laurustinus), Manettia cordifolia, Erythrina crista-Galli, Amaryllis and Bouvardia. Aloysia citriodora and the Hydrangeas were killed down. They came up however in spring, but the latter did not bloom. If the foregoing notes of my experience should prove of any service to your readers you are at liberty to use them ; but as I have not much facility for increasing my Horticultural knowledge in this locality, you must excuse my not furnishing more valuable information, indeed I cannot boast of many participants in the pleasant pursuit. C. Lutterloh.

CALENDAR OF OPERATIONS,
FOR OCTOBER.

Written by Practical Gardeners, for the Philadelphia Florist.

HARDY FRUIT.

Planting Fruit Trees.—There is some difference of opinion among cultivators as to the most suitable season for planting fruit trees; although we are inclined to believe that the majority prefer planting in the fall. We decidedly prefer that period for this operation, having learned from that best of all monitors, *experience*, the advantages gained by it. We have seen numerous statements condemning fall and recommending spring planting; but "facts are stubborn things," and so far as our observation extends, we consider it nearly the gain of a season in the establishment of a tree to transplant it immediately on the fall of the leaves, or as soon as they change color and show symptoms of having performed their allotted mission. It is quite possible, that in some cold, damp situations trees planted at this time may make little progress in the formation of roots during winter, and be in a worse condition for growth in the following spring than if they had not been removed until that season; but this is an extreme supposition—we opine few fruit growers would plant trees in such situations, either late or early. Some people reject the idea of roots extending without a corresponding action of leaves. These are principally that section of sap-circulationists who hold that vegetable life is dormant during the time between the fall and renewal of leaves, who consider that the sap moves up on the excitement of heat, gradually finds its way to the top, and finally descends to the roots where it remains snug until spring again invites it to its periodical journey. The accidental neglect of a few trees that were lifted in the fall, and thrown into an out-of-the-way corner, with the roots carelessly covered, was our first "ocularly demonstrated" lesson on this subject. On removing them in spring, we found a mass of young roots intertwined to a degree which made them difficult of separation.

In propagating choice plants by cuttings, gardeners place the slips into the heated soil of a "hot bed" to stimulate the formation of roots, while the tops are kept cool and apparently dormant. The same results attend autumn planted trees. The soil parts slowly with, and still retains much of the accumulated heat of summer, while the temperature of the air is rapidly decreasing. From direct experiment we have found the maximum heat of the soil to be in the month of September. During the month of October, 1851, we ascertained the average temperature of the air, at 7 o'clock A. M., as indicated by a thermometer buried 18 inches in the soil, to be in relation as 49 to 60—showing that the air was much cooler than the earth. Here we have a natural hot bed, as it were, in which to plant trees. In spring the reverse of this takes place, the air at that season rapidly increases in temperature, while the soil absorbs heat slowly. Trees planted at that season are early excited into leaf; each leaf acts as a pump, draining the juices from the plant, which as yet has no roots to supply the demand. Hence we frequently observe spring planted trees pushing forth shoots and apparently doing well, suddenly wither up and die on the approach of a few dry, warm days. Trees cannot be transplanted in ordinary cases without cutting and exposing the roots;

these, especially at their extreme points, are very delicate and easily dried up and killed, when subjected to dry air; therefore there is less liability of danger from this cause in lifting trees during the latter part of October and the following month, as the air is then in general more highly charged with moisture than in the months of March and April. Spring planted trees require more care in every respect than those planted in the fall; and after all, they can never make so fine a start as those that are furnished with numerous healthy roots.

A soil free from excessive moisture is of the first importance for fruit trees. They cannot remain healthy and fruitful when the soil is wet. Much has been said and written of late about the chemical and mineralogical constitution of soils, and very little about their physical texture. We will see a reaction one of these days, in this matter.—We are fully convinced that the porosity of the soil, its permeability to air and water, are qualities of more importance in cultivation than the supply of chemical ingredients. They are necessary, absolutely necessary; but it is quite possible, indeed, it has been proved by experiment that a soil may have a sufficiency of inorganic matter necessary for a given crop, and yet be unproductive, if the decomposing influences of the atmosphere are excluded. The fact that about nine-tenths of the whole bulk of plants is made up of gaseous matters, is sufficiently indicative of the necessity of keeping the soil in a state that will readily admit their access to the roots.

Another error sometimes committed in planting fruit trees, is that of placing them in a rich, exciting compost. This retards their fruitfulness, and not unfrequently induces disease. If the production of timber was the only desideratum, then the soil may be enriched to the fullest extent consistent with healthiness. But the wood producing and the fruit producing inflences are quite distinct. A young tree does not begin to fruit until its wood producing energies are somewhat relaxed—hence the adoption of what has been called the dwarfing system—that of engrafting trees upon stocks of a slower growth than themselves, such as the pear on the quince, the peach on the plum, and the cherry on the mahaleb, to induce precocity in fruiting. On this subject, Lindley, in his Theory of Horticulture, observes:—"Whatever produces excessive vigor in plants is favorable to the formation of leaf buds; while on the other hand, such circumstances as tend to diminish luxuriance, and to check rapid vegetation without affecting the health of the individual, are more favorable to the production of flower buds than of leaf buds. Thus, a plant in a sterile soil and exposed situation flowers sooner and more abundantly than one in a rich and shaded place. Young vigorous plants flower later and less abundantly than old ones."

It will not be out of place to record the following: In a row of Bartlett pear trees, all planted at the same time and of the same age, one of the number bore two crops of fruit before the others showed symptoms of forming any thing like a blossom bud. Much speculation was indulged in as to the reason of this exception. An underground drain used for carrying off an occasional surplus of water from a tank in the vicinity stopped; it was found necessary to investigate the causes. The result proved that this fruitful tree was planted immediately above the drain, its roots had completely monopolized the whole area, every crevice was matted with fibry roots for a consider-

able distance up and down. We considered this fact worth a volume of theoretical reasoning. From these remarks we infer that the presence of air is all-important to the roots. If therefore, you intend to plant a row of fruit trees, mark out a space eight or ten feet wide, and *trench* it over to a depth of eighteen inches or more the whole length of the row. This will give more satisfaction than digging deep holes, which, on retentive subsoils, are little else than mud-puddles one-half the year. S. B.

NOTES AND MEMORANDA FOR OCTOBER.

Hot House.—The principal exhibitions for the year end with September, and exhibitors will be by this time, aware of their deficiencies, and observers will have obtained additional items of information, and gained renewed enthusiasm in one of the happiest of occupations. Opportunities have been afforded for noticing what are the most beautiful plants in cultivation, and the novelties which have proved favorites will be eagerly sought after at this time. Some of those advertised last month by Hogg & Son we have already seen, and noticed as good. Since then, we have seen in bloom Luculia Pinciana, Allamanda neriifolia, Acacia cultriformis, Centradenia floribunda, Turnera elegans, Dipteracanthus spectabilis, (*Henfreya*,) Browallia Jamesonii, Ceanothus azureus pallidus, Weigela rosea, and Forsythia viridissima, of that collection, and they are really desirable. We also notice in other quarters Achimenes Ghiesbrechtii, A. longiflora alba, Balsamina latifolia alba, Cattleya crispa, Epidendrum oncidioides (2 orchideæ,) Isotoma axillaris, Clerodendron Devonianum, Ipomæa limbiata, Ipomæa ficifolia, Lychnis Bungeana, Oldenlandia Deppii, as being also beautiful. Young growing plants intended for specimens next year, should be repotted as often as the pots become full of roots, into sizes a little larger; at this season of the year large shifts are dangerous, unless in well skilled hands. Do not encourage specimens now too rapidly by applying a higher temperature, or more water than is necessary to keep them barely growing. However, in general, stove plants in America will bear more heat and water, than in England in winter, owing to the greater amount of light we have. Whenever the weather is fine give all the air possible, not allowing the temperature to fall below 60°, lessen the atmospheric moisture of the house, and let the plants have as much of the light as it is possible to get. These latter remarks apply to the orchideæ house with the addition of taking greater care to prevent cold draughts getting to them.

Greenhouse, Conservatory, &c.—Cinerarias, Calceolarias, and other tribes of plants intended for flowering during the winter and spring months, must be repotted as they continue to fill their pots with roots. Hyacinths, Anemones, and Ranunculuses, intended for forcing, should be potted at once. The soil for anemone should be composed of one third well rotted leaf mould (at least two years old), the rest sandy loam. Hyacinths and Ranunculus may have well decayed cowdung instead of leaf mould. After potting, plunge the Hyacinths and Ranunculus, in any material out of doors until they are required to be brought in for forcing, and the anemones may be placed in a cool airy situation, where they may only receive water enough to keep the soil damp. Where auriculas are grown they must be protected from heavy rains, get abundance of air and be

kept as cool as possible. By the end of the month most plants will require housing. Plants generally should be housed sooner than they are—the practice of leaving them out till the first white frost appears, is reprehensible. Many plants will *endure* a degree of cold which, however, I consider often *stunts* them. If insects are troublesome, spare no pains to clean the plants before housing—"a stitch in time saves nine." Oranges are so often unhealthy in windows and gardens, that it would not be out of place to observe that where they are so, it would be well to keep them pretty dry during the winter till May, then prepare a rich border, in a partially shaded situation, and turn them out, lift them in the fall, give them the same treatment another season, and they will generally become restored. This principle can be applied successfully to most unhealthy plants.

Flower Garden, and Pleasure Ground.—Many prefer planting their deciduous trees in the fall; where the roots can be protected from frost it is the best plan; where planting is to be done on an extensive scale early in spring will be preferred. Any unhealthy branches on trees should be removed, tree pruning should be performed as soon after the fall of the leaf as possible—cut the branches close back, and paint or tar the wound over.

Vegetable Garden.—The main things to attend to in this department are to provide a stock for next season, and to store and prepare fall crops for winter use. Cauliflower, cabbage, and lettuce have been sown, and by this time will be ready for transplanting. The strongest cabbage plants may be planted on the north side of ridges, while lettuce (the Hammersmith), can be planted on the south. A little loose straw thrown over them will protect them from very severe frosts. Cauliflower can be planted in pits or frames where they are to remain. They love a rich, deep, moist soil, and abundance of air. The Walcheren is hardier than the Dutch, but not so early. Radishes may still be sown in frames. Where the hardier kinds of Broccoli are grown, such as Portsmouth, Chappels cream, or Large Sulphur, they must be protected from severe frost by digging away a *spit* on the north side of them, bending them down and then covering them entirely with earth. Cabbage can be lifted, and placed side by side in any corner sheltered from the sun, and covered with straw with a few old shutters throw over to keep them dry. Preserve celery by standing the stalks in rows, covering with dry soil and banking them up.

T. J.

Retrospective Criticism.—By Brougham.

National Botanic Garden.—We may now have some hopes of a National Botanic Garden, as the Park undertaken at Washington may ultimately become one. We do not agree with your contributor in his remarks on large collections, as those very ones he mentions have caused the introduction and distribution of some of our best and rarest plants.

European Gardening.—As far as large places are concerned, we cannot yet compete with England; but there is no reason why we should not in cottage gardens. Our ladies have taste enough, but it is a deserved reproach of American ladies that they do not take out-of-door exercise to an extent equal to that so advantageously indulged in by English ladies.

The Chiswick Flower-show will eclipse the exhibitions of American societies for many years to come; specimen plants do not seem to be much in vogue in our city; perhaps they would not be properly appreciated. It will require years to attain to such a show of Orchids—no natural order of plants is so various, or so beautiful as these; but the enormous prices charged by the European nurserymen for the rarer kinds, put them beyond the reach of most of our collectors.—Still, Philadelphia has many fine Orchids, *Phalænopsis amabilis, and grandiflora* are here, and many fine Dendrobes and Cattleyas.

In your calendar of operations we are recommended to take up for greenhouse forcing; Spiræas, Deutzias and Lilacs—why not add to these *Jasminum nudiflorum*, *Weigelia rosea*, and *Forsythia viridissima?* This last, by the way, we have seen in bloom in the last week, caused by an insect having eaten the leaves off of the branch.

Horticultural Societies.—In your criticism of the schedule you are in the minority as regards Dahlias. You will find they have, and very justly too, very many admirers; for beauty of form they are only excelled by the Camellia, although the colors are sometimes dull, and the odor what Mr. Van Houtte calls *fort peu agréable.* You still have the bad taste to abuse Cacti; and you are not singular in it; so we must wait for an improvement in the public taste, as well as in yours.

Penna. Hort. Society.—We think that Dr. Brincklé's amendment (with Mr. Hancock's insertion of the words *pro rata*) very reasonable and just. There was little or no competition in plants and flowers, so that we have nothing to say this time of the awards.

Philadelphia has already become celebrated for the cultivation for the first time in this country of the Victoria regia; she owes to the taste and spirit of another amateur the possession of an equally celebrated plant. A specimen of the Amherstia nobilis has lately been introduced here, and we may hope in the course of another year or two to see it in flower. The plant is of a most graceful habit, having pendant branches and leaves, like the Brownea grandiceps, and long racemes of rosy vermillion flowers, with yellow eyes on the petals, and of the nat. ord. Leguminosæ. It seems to be a rapid grower. The plant which flowered at Ealing Park was, when first brought there in July 1847, less than two feet high; and in two years, when it flowered, it was nearly nine high and about thirty in circumference. It was grown in a very damp hothouse, with a strong bottom heat.

Hamilton Village Horticultural Society

Held its exhibition on Tuesday, September 21st, and three following days. A spacious edifice was erected for the purpose, and the display of plants, flowers, fruits, and vegetables was extensive and attractive. Collections were deposited by J. F. Knorr, Esq., W. W. Keen, Esq., and other residents of the village. Some handsome designs were also exhibited, as well as fine displays of fruit and vegetables. The exhibition was satisfactory to the enterprising promoters of horticulture in this improving village.

The Florist and Horticultural Journal.

Philadelphia, October, 1852.

The scent of the keen morning air reminds us that a change is coming over the season—a matter of no small importance to the anxious gardener. The fastidious denizens of warmer latitudes can no longer be permitted with safety to partake of the space common to our hardy and more familiar floral favorites; and the enthusiastic amateur whose winter gardening facilities are limited, looks around with anxious eye to provide a shelter for such as can not bear the blast of winter. Cellars are prepared for the reception of old established Oleanders, which seem to agree pretty well with the recurring season of deprivation of light and moisture, as they remain from year to year family ornaments, the constant followers of the family. Large Orange trees are located for the winter, secure from the cutting airs which insinuate themselves into the various passages about the dwelling house; and after October has fairly set in, few of the tender favorites are abandoned to the mercy of the changeful season. And are our window gardening friends to have no more flowers till spring—shall they remain for many long months without a flower to cheer them, and give promise of the return of summer? No, they shall not remain thus destitute. The indefatigable florists of our city and neighborhood are preparing for their gratification some winter-flowering gems. Chinese Primroses, Mignionette, Cinerarias, Chrysanthemums, Roses in many varieties, are still available, Many persevering amateurs have in requisition some fall-flowering annuals and biennials, which they have taken care to preserve against the scanty season. Quantities of Oxalis are in readiness, and with the assistance of the return of the grateful Hyacinth, Tulip, and Crocus, and the delicate Narcissus, our friends are still elated with the prospect of winter and early spring flowers. The Schizanthus, Sweet Alyssum, and many familiar annuals will come in proper season, to carry us along till Spring returns with her offerings, preparing the way for a return of the bountiful gifts of the succeeding Summer.

The superintendent of the conservatory has his hands full at this season; hundreds of plants have been deposited all around the garden since the advent of summer. They have flourished and increased in size, exposed to the summer air; but they must be returned to the protection of the conservatory, or the penetrating frost would speedily annihilate them. All such plants must be carefully examined and replaced in their winter quarters, free of vermin or disease, if we expect them to become ornaments to our collections or at all creditable to

ourselves. The season will not wait for us. All those plants deposited in the flower borders, which we intend again to make familiar inmates of the greenhouse, must be promptly looked to. The florist has also his peculiar cares. He begins to think of his next display of Tulips, and to prepare for a fine display of Hyacinths; his Auriculas are carefully preserved from damping, and he begins now to abandon his fine bloom of Dahlias to the severities of the relentless season—they will not long flourish, for frost has a peculiar affinity for them. We must however reluctantly bid adieu for the season to the luxuriance of the garden—crowded as it has been with native and foreign gems. The greenhouse and hothouse must now have their share of patronage. The favorite Camellia having been carefully attended to during the summer, has perfected its growth and awaits its season to expand its numerous buds, so much admired in the conservatory and ball room. The much longed-for Camellia season is then approaching, accompanied by many social gratifications. But Camellias are objects of some annoyance to the window gardeners—many fail to secure healthy full-grown buds during the summer, and have generally entrusted them to the care of the florist, who has more facilities for doing justice to them. They do not flourish in rooms during the summer, as they seldom enjoy enough light, in conjunction with the high temperature in which they are generally placed; and when in good health they require a fair supply of water. Although a general favorite, we do not find that they give general satisfaction when grown in dwelling houses, as they require a lower temperature in winter than is common in sitting rooms—and yet they must not be frozen.

Having taken a cursory glance over our winter prospects, we would now recommend the section of Bulbous roots to the notice of our readers, and advise them of a rather deficient supply in the market. All who desire good strong bulbs should suit themselves at once, as of course the choice is greater the earlier they apply. Hyacinths are a great ornament to the city dwelling, and by attention to the directions contained in our pages, no doubt they will be successfully cultivated by many residents of the city who attempt the nursing of no other species of plant.

POMOLOGY.

The importance of this subject is not sufficiently understood by the majority of persons who take part in the active business of life, or we should not hear individuals inquire "what is the meaning of Pomological Congress?" The word congress is sufficiently understood, but intelligent and shrewd men cannot imagine what a congress of apples and pears can be. This is because their ideas are not sufficiently generalized; they think of no *Congress* but that at Washington; and as

for *Pomological*, they are not at all clear as to its exact meaning. Many jokes have originated on the matter, and some questions have been asked and answered satisfactorily. Notwithstanding all that has been said and done, we would like to give a little move to the subject in what we imagine, of course, to be the right direction. America is a rich country in fruits—no stranger who passes through our markets at this season but is struck with the quantity of choice fruits exposed for sale. Splendid Grapes, as *Catawba*, *Isabella*, *Elsinburg*, *Madeira;* Peaches in endless variety and abundance; Plums large and choice; Pears large, delicious, abundant and cheap, rich in flavor and handsome in appearance, from the *Seckel*, the universal favorite. to *Petré*, *Moyamensing*, *Dearborn's seedling*, *Cabot*, *Kingsessing*, *Washington*, and many others of fine melting flavor, and abundantly produced, even in our city yards. And as to those imported, their name is legion, and their characters set forth in flowing style by the well paid and fluent descriptive catalogue writer. But then the Apples! Think of one hundred and fifty sorts and upwards, lying on the Congress table, from the collection of one representative!

The utility of this newly formed body will soon be appreciated.—Such an organization benefits the entire community. It examines into subjects beyond the reach of ordinary discussion—it calls together the best practical information in the country at its deliberations. The character of certain fruits is discussed, and their fitness for cultivation in certain localities; and those are brought prominently forward which are acknowledged to be fitted for general cultivation. After this society shall have been properly organized, cultivators will be enabled to procure reliable information as to what peculiar variety should be planted in certain localities or soils, and the exact description of any fruit, together with its peculiarities of cultivation, at once placed within the reach of those interested in such matters. From the quantity of fruit cultivated in this country, every one will admit the necessity for sound practical information on the subject; and such will, we have no doubt, be made available by the National Pomological Society when thoroughly in working order, by their reports and proceedings. The successful result of the labors of those who originated the Pomological Congress is much owing to the indefatigable exertions of the late President, Dr. W. D. Brinckl̀e, whose enthusiasm in the science, and affability of manner has gained for him the respect and gratitude of all who are brought into contact with him in this pleasant pursuit. No labor or pains were spared by him to render the late meeting interesting; and his attention to the strangers who attended the late Congress from a distance, was no doubt appreciated. A pressing invitation was tendered by the doctor to the delegates, and others interested in Horticulture, to partake of the hospitalities of his house,

and a large and interesting company, consisting of the principal amateurs in horticulture and cultivators from a distance attended his horticultural party, on the evening of the adjournment of the Pomological Society—an event which will aid much in fixing the era of the founding of the National Pomological Society in the minds of the visitors.

The American Pomological Congress.

This body, which held its first session at Cincinnati in 1850, met in Philadelphia on the 13th instant. The upper saloon of the Chinese Museum was appropriated to their use, having been prepared for their reception by the Pennsylvania Horticultural Society. The Hall looked rich with the display of fruits from all parts of the Union, deposited on the tables, consisting of Pears in endless variety; Apples, a most extensive assortment; Plums, Peaches, Nectarines, Grapes, &c.—Amongst the contributors were the Hon. B. V. French, of Mass.; Hon. Marshall P. Wilder, Mass.; J. S. Cabot, Mass.; Messrs. Hovey & Co., Boston; Ellwanger & Barry, Rochester, N. Y.; Messrs. Parsons & Co. Flushing, L. I.; A. H. Ernst, Ohio; S. Walker, Esq., Roxbury, Mass.; Wm. Reid, Elizabethtown, N. J.; A. Saul, Newburg, N. Y.; Paschall Morris & Co., West Chester; Isaac B. Baxter, N. J.; Thos, Hancock, and George B. Deacon, Burlington, N. J.; H. R. Roby, Va.; Joshua Embree; R. Buist, Rosedale, Phil'a.

It was admitted on all hands that so extensive a collection of fruits had not been before exhibited. Some of the specimens were unusually large and fine; and many fine pears of recent introduction were viewed for the first time with interest by experienced cultivators, and their claims to favor tested.

The meeting was called to order by the President, W. D. Brinklé, M. D., who in an interesting speech stated the history and objects of the Congress. He stated that although he felt highly honored by being chosen at Cincinnati as President, yet it was not his intention to become a candidate for re-election. The selection of a successor and other officers, as well as the adoption of a constitution and by-laws, was to form a portion of the business of the present assembly; he hoped their deliberations would be productive of much benefit, and that the society would be firmly established. He assured them of his continued interest in its welfare.

Names of delegates and their credentials were then received.

A committee was appointed to choose officers for presentation to the meeting. Their report having been adopted, Marshall P. Wilder was elected President. A number of Vice Presidents, Secretaries, Treasurer, with State Fruit Committees were afterwards chosen; also, an executive committee, a committee on native fruits, a committee on synonymes, and a committee on foreign fruits. A constitution and by-laws were adopted, and the name of the society declared to be the National Pomological Society. A great many members were enrolled on the payment of $2 for the biennial term, or $20 for life members.

Resolutions expressive of regret at the sudden death of A. J. Down-

ing, were passed, and a committee appointed to make arrangements for the pronouncing of a eulogy on his character, by Hon. M. P. Wilder, who had been requested to do so by the late President.

The principal business of the society was then proceeded with, which consisted of discussions by the members and delegates present, as to the character of the various fruits brought before them, their respective claims to consideration as being fitted for general cultivation, whether they should first have a trial before recommended, or whether they were entitled to cultivation in certain localities only. An animated discussion was entered into and continued for the greater portion of the session, as to the qualities of several Pears, Plums, Cherries and Apples.

A motion was offered by R. Buist, for the creation of a fund in order to present some suitable testimonial to Mrs. Downing, whatever course should be decided upon by a committee to be appointed for that purpose, subscriptions of one dollar and upwards to be received to create a fund. The following gentlemen were appointed on that committee—Messrs. Wilder, Cope, Buist, Cleveland, Hodge, Elliott, Young, Breckenridge, and Kennicott, with power to add to their number if necessary.

Before the adjournment of the society, Mr. Cabot, in behalf of the Massachusetts Society, invited the members of the National Pomological Society to meet in their rooms at Boston, in 1854, which invitation was accepted, and the date of meeting left to the decision of the Executive Committee.

Gen. Patterson, on behalf of the Pennsylvania Horticultural Society, invited the delegates and others to visit the exhibition of the Society, to take place the following day; and stated that tickets of admission would be furnished for themselves and families. The thanks of the association were then tendered to the Hon. M. P. Wilder for the manner in which he presided over the deliberations of the Society; and also a vote of thanks to the Secretaries for their attention—after which it was moved that the Society adjourn to meet at Boston, A. D. 1854.

The organization of the National Pomological Society was thus perfected in September 1852, after a sitting conducted with great unamity and good feeling, and giving promise of much benefit to the fruit cultivators and the public generally, by the careful and patient investigation of the claims of the various kinds of fruit now in cultivation, and the examination of the many new seedlings from time to time brought into notice. The importance of Fruit Culture to the farmers of America is beginning to be understood; and with the aid of a well organised Society, by whose aid reliable information can be procured and disseminated, a great benefit will be conferred on the community generally. Every individual interested in the matter, should collect materials from observation to be made available at the meetings of the society, as this is the means by which it purposes to be useful to the community.

Pennsylvania Horticultural Society.

The Annual Exhibition of this Society generally anticipated with much interest, has passed off with perhaps more than usual success. A propitious season had placed abundant means in the hands of the cultivator to make a rich display, and the meeting of the National Pomological Society had been the means of collecting a large assortment of Fruits and attracting many Fruit cultivators who would not otherwise have attended. The Upper Saloon was tastefully decorated by large temples adorned with wreaths of evergreens and enlivened with flowers. The rich collection of fruits deposited by the delegates to the Pomological Society, increased in a great measure the interest of the Exhibition as few of the visitors had ever beheld so varied an assortment.

The assortment of Vegetables was unusually extensive and the specimens superior. The competitors in several departments were numerous and the judges no doubt were a little puzzled in awarding the premiums.

The collection of Foreign Grapes, so large and choice, proves that much progress is making in this department, although we have not yet arrived at that point of excellence which may be attained by skill and perseverance.

The display of Plants and Flowers confined to the Lower Saloon, was also extensive, and many of the lofty tropical specimens which the amateurs of Philadelphia boast of, were drawn forth from their locations. The Victoria Lily, still a great object of attraction was furnished by C. Cope, Esq. This plant having produced nearly one hundred flowers, had however exhausted its blooming capacity, and a flower from the conservatory of R. Buist, Rosedale, supplied the deficiency—a neat living plant was also furnished by Mr. Cope, which we believe was afterwards handed over to the enthusiastic gentlemen of Hamilton Village, who spare no pains to increase the taste for Horticulture in that flourishing and beautiful locality. The Victoria has now been successfully cultivated by Mr. Cope, R. Buist of Rosedale, Philadelphia, and S. Feast of Baltimore, Md. Mr. Feast has been quite successful with his plant which has produced several fine flowers to the great gratification of his numerous visitors. The splendid fountain, a model of that exhibited at the Crystal Palace, deposited by Peter Raabe, of Seventh and Parrish Streets, clothed with mosses and flowers, was a great centre of attraction. It must have cost Mr. Raabe considerable pains and expense in its construction as it combined artistic skill and beauty of form with sufficient strength and size. It almost reached the high ceiling of the Saloon, and was perfect and symmetrical in all its parts—it obtained deservedly the first premium, and was a great improvement on former designs. Other designs were exhibited by Mr. J. Cook, Maurice Finn, gardener to J. Lambert, Esq., J. Kinner, and R. Egee to which prizes were awarded. Bouquets or designs for the table were deposited by Thomas Meehan and H A. Dreer, and Indigenous Flowers by Thomas Meehan and R. Kilvington. Several special premiums were also awarded in this department. A little footstool covered with mosses and Lichens, and tastefully adorned with the title of "Flora's footstool," from C. Cope's, Esq., was noticed as very appropriate.

To enumerate specially all the attractive objects displayed, or furnish a detailed account of the prizes awarded would we fear encroach upon the space which we must necessarily devote to general topics. We must however notice a few of the more striking objects displayed.

The first premium for Dahlias was awarded to 40 blooms from the nursery of R. Buist, Rosedale—many of them large and perfect flowers. Gerhard Schmitz obtained the second, his flowers were of very fine form but rather below the medium size—he also obtained the prize for a seedling. A fine stand of these showy flowers which still attract much attention notwithstanding their abundance was exhibited by H. A. Dreer. We never questioned their beauty but do not look on their cultivation as a proof of Horticultural skill.

Fine bunches of Black Hamburgh grapes, were exhibited by H. W. S. Cleveland, Burlington; J. Reilly, gardener, Insane Hospital, and a collection of different varieties by David S. Brown's gardener, and Mr. Johns, Pine Street. H. B. Tilden, Tacony, exhibited fine bunches White Muscat, Frontignan, Sweet Water and Black Hamburgh. Black Hamburghs were also exhibited by John Daly, gardener to C. P. Fox, Esq. Native grapes were exhibited in quantity. A collection by Isaac B. Baxter—Isabella, by J. Stokes—Catawba, by W. Dorr—Elsinburgh, by P. Raabe and R. Buist—and several collections by other contributors.

Peaches were exhibited in abundance.

Nectarines, Red Roman, by Thomas Meehan, gardener to C. Cope, and Elruge by H. B. Tilden.

The collection of pears was very extensive. The premium for the best collection of named native sorts was awarded to Thomas Hancock, Burlington, N. J.

Foreign Pears. The premium was awarded to Hon. M. P. Wilder for the best collection, and to Ellwanger & Barry, Rochester, for the second best. Fine specimens of particular varieties were exhibited by H. B. Tilden, Tacony, of unusual size.

The display of apples was very extensive, and together with the regular premium several special ones were awarded.

The vegetables were so numerous and fine that we cannot stop to enumerate or particularise.

An extensive display from A. Felton, Jr., obtained the first premium in the Market Gardener's department. The first premium in the Amateur's Class was obtained for a display by J. Riley, and the second by J. Jones, gardener at Girard College. A third was awarded to T. Meghran, gardener to R. Cornelius, Esq

A. Felton, Jr., obtained 1st premium for beets—James Jones, the second.

Carrots—A. Felton, Jr.

Salsafy—James Jones, first premium.

Wm. Hammill, gardener to C. H. Fisher, Esq., for the best cabbage, red and white. Lettuce best, A. Felton, Jr.; second T. Meghran. Celery best, J. Jones; second best, John Riley.

Pumpkin best, Wm. Hammill. We are sorry that our space does not permit us to give an entire list.

Amongst the rare plants exhibited were *Amherstia nobilis*, very rare and lately introduced at a great cost from the collection of F. Lennig, Esq.; also *Allamanda neriifolia* and *A. Schottii*, *Brownea coccinea*, a fine tropical leguminous plant with rich ample foliage and producing fine heads of bright scarlet flowers, *Brownea grandiceps*, a

plant with magnificent and striking foliage allied to the former. *Tacsonia sanguinea*, also quite new but seemingly identical with a plant introduced under the name of *Passiflora diversifolia*, the close connection of the genus *Tacsonia* with that of *Passiflora* is well known. *Ixora Griffithii*, *Anopteris glandulosa*, *Stephanotis Thouarsii* were also observed as rather rare. This unique collection contained also *Medinilla Sieboldii*, *M. speciosa* and *M. magnifica*, three fine Melastomaceous plants, two of which have been known for some time in several collections around the city.

A choice collection of exotic Ferns were exhibited by Jas. Bisset, Sr., gardener to James Dundas, Esq., and were much admired. Many fine plants were contributed from Mr. Dundas' houses, amongst which were *Carolina princeps*, *Zamia horrida*, The Tapioca Tree, *Hura crepitans* or Sand Box Tree, *Fourcroya gigantea*, *Nepenthes Raffiesiana*, Raffles' Pitcher Plant.

A number of large specimens were contributed from Genl. Patterson's collection, Sago Palm, Shaddock Tree, Lagerstrœmia, Citrus and Plumiera were amongst the most prominent.

A. M. Eastwick, Esq., Bartram Hall, sent a collection of large specimens.

Collections were also sent from the gardens of G. W. Carpenter, Esq., John Lambert, Esq,, Joseph Ripka,Esq., Manayunk. And from the collection of J. F. Knorr, *Ipomœa ficifolia*, *Ipomœa limbata*, *Medinilla magnifica*, *Agnostus sinuatus*, (*Stenocarpus Cunninghamii*,) *Abelia rupestris*, and many fine varieties of Fuchsias and other plants.

R. Buist exhibited an extensive collection of Hardy Evergreens, and several rare Coniferæ, amongst which were Libocedrus Chilensis, and Thuya Doniana. Medinilla magnifica and M. speciosa, two fine hothouse plants were also amongst his collection. P. Mackenzie exhibited an interestiug collection of Fuchsias, and other plants amongst which were Campanula Vidalii, a fine new Bell flower. Benj. Gulliss had a collection of Roses, Verbenas, &c., including many fine varieties in good condition.

R. Kilvington exhibited many novelties, his collection was extremely choice, including some rare Native plants. Mr. K. has always been careful to give the Natives a share of his attention. A new species of *Rhus*, (sumach) was much admired. John Dick of Helendale Nursery, exhibited Roses, Azales, &c.

Robert Scott of the Federal Street Nursery, had some new and well grown Fuchsias, Acacias, and rare greenhouse plants. D. Ferguson of Laurel Hill, exhibited a choice collection of Evergreen shrubs.

Amongst many other contributors were Jas. Ritchie, Kensington Nursery; John Sherwood, Sch. Seventh and Chesnut; A. Dryburgh; Wm. Hall, Andalusia. We are sorry we cannot enumerate more fully the novelties produced here, but we find our space might be wholly taken up with the interesting objects deposited by the different nurseries, which we know might not suit the taste of the majority of our readers. We have taken especial care to attract as much attention as possible to the proceedings of this Society convinced that Horticulture is greatly aided by such means. The number of visitors throughout, testified the gratification afforded, and the receipts we believe were equal if not greater than on former occasions.

The Stated Meeting of the Society was held on the 21st. The President in the chair.

A collection of seedling Dahlias, containing many fine varieties was exhibited by Gerhard Schmitz. Also a collection of named sorts by Jas. D. Fulton. Some business connected with the late exhibition was transacted. Adjourned.

New York Horticultural Society.

A correspondent informs us that the Exhibition of this Society passed off successfully; he states that the objects were equal to those exhibited at Philadelphia in quality, though not in quantity. Fine Grapes were exhibited from the houses of J. C. Green, Esq., Staten Island, gardener, Wm. Chorlton, which obtained the first premium. His collection consisted of—

Syrian,	bunches	weighing,	2 lbs.	14 oz.	each
Xeres,	"		2 "	3	"
Black Hamburgh,	"		3 "	1	"
Victoria,	"		2 "	1	"
Black Prince,	"		1 "	13	"
Austrian Muscat,	"		1 "	1	"
Deacon's Superb,	"		1 "	4	"
Reine de Nice,	"		2 "	9	"

The exhibition of plants and flowers was extensive and varied, and the second great exhibition increased the prospect of a flourishing society being established permanently in New York.

West Chester Horticultural Society.

Also held its exhibition on the 16th, 17th, and 18th of September. The affair was prosperous and realized the expectations of the managers. The list of competitors and contributors was extensive. The premium for the best display of Green House Plants was awarded to P. Morris & Co., also the premium for the best display of Dahlias. The premium for the best display of Fruits was awarded to A. Marshall & Co. We regret that we cannot find space for more details.

Philadelphia Co. Agricultural Society.

The annual exhibition of this Society took place at the Rising Sun Village on September 31st, and continued on October 1st. A great many visitors availed themselves of the opportunity of inspecting the produce of their friends the farmers. The display of cattle was extensive; horses were not very numerous, but those exhibited were of superior quality. Short-horned or improved Durham cattle were numerous. Amongst the contributors in this class were the President of the Society, James Gowen, Esq.: Gen. Cadwalader, Thos. P. Remington, Owen Sheridan, and Chas. Kelly, Esqrs. Several teams of fine oxen were exhibited, and swine from J. Wilkinson, Mount Airy, and others. The address was delivered by B. P. Johnston, Esq., Cor. Sec. of N. Y. State Society. He alluded to the necessity of systematic arrangement in farm operations, and the importance of keeping farm accounts, as without this the farmer was in the dark as to his actual position. The progress of the American implements at the World's Fair was detailed with great spirit by the speaker, and the company were made acquainted with the other side of the picture from that represented in the newspapers in the past season. He then dwelt on

the necessity of education amongst farmers, and pointed out to them their importance as a class.

At the dinner where Mr. Gowen presided, he prefaced a toast complimentary to the orator of the day, by alluding to the influence and character of the N. Y. Society, and the aid rendered by it to the cause, to which Mr. Johnston suitably responded.

The ploughing match came off at the Hunting Park, in the afternoon. On the whole the exhibition was a successful one. The increase in the poultry department was observed by the committee, as they found great difficulty in judging between the different competitors.

Culture of Grapes under Glass.

BY WM. CHORLTON, NEW BRIGHTON, STATEN ISLAND.

If the cultivator in his multifarious operations were to work more in accordance with the laws by which the vegetable kingdom is governed, he would in many cases produce more important results than are now generally obtained. The actual product might not be greater but the results would be more certain, and the failures less in proportion, than is too often the case. Notwithstanding our boasted excellence and skill, there is yet much room for improvement and unfortunately many of us have many practical prejudices to overcome. However liberal minded we may wish to appear, there are many dogmas and much pedantry in existence amongst us. Our training has somewhat instilled these feelings into our minds; we have become habituated to it, and the great apparent success of particular methods, have in a great measure convinced us that those operations are somewhat approaching perfection. It is very true that we have made great progress within the last few years in the science of horticulture, and have overcome many of the old superstitious set rules by which our forefathers worked, but there is much yet to be done. We have something to unlearn, and a great amount to learn before the goal of perfection is arrived at. To go to school with ourselves, to observe and take nature's laws for our guide, to woo her and coax her to give up her yet hidden treasures and assist us in our handiwork, and before we denounce anything that may seem to be opposed to our ideas in practice, we ought to weigh calmly and consider the matter and not come to too hasty a conclusion till proof of its inferiority has been fully demonstrated. I am led into this train of reasoning by thinking of the general way in which we grow and prune the exotic Grape Vine on the one hand, and that which has been, and yet is practised in some isolated cases on the other. I find that where the head has been allowed to extend itself somewhat from year to year (other circumstances being suitable) there has been the greatest longevity and more certain and permanent crops.

It is a physiological fact, that all plants according to their structure increase in bulk and solidity of branches, trunk, and roots, proportionately to the amount, healthiness, and quantity of the leaves, freely exposed to light and heat, and without the observance of this due proportion all are comparatively deteriorated. Take for example an oak, practice upon it the same treatment as the grape vine receives, keep its trunk pruned to the same space every season and it is evident that in time it would become stunted in every part, its constitution enfeebled and its period of existence shortened. Some may

say that the comparison is not correct, that the two cases are very different. In what I would ask? The same general law governs both with this difference, that the grape vine bears it for a time with more impunity. In the long run it will arrive at the same state of degeneracy, for man cannot alter nature's immutable laws, although he may for a time seem to divert them to suit his own puny ideas. This is no new idea, as the utility of allowing periodically an extension of branches has been often treated of from Speechly downwards, and its good effects as often demonstrated, as is proved by many examples of old and yet productive vines in Britain and elsewhere. As in course of time a vine if yearly allowed to occupy more space would fill an ordinary house, it becomes a matter of consequence that the crop should not be lost during the interval. If the following method has any pretence to novelty and the accomplishment of the object I am pleased to record it. Admitting that the house has to be planted; choose a vine of the most favorite kind, which is intended to remain permanent—plant it midway from each end of the house. At a distance of twelve feet plant others of the next desirable sorts as they may remain for some years, fill up the spaces with any other sorts that fancy may dictate, so that each plant may be about three feet apart. At the end of the first season's growth if sufficiently strong, head down to five or six feet, and disbud each alternate eye, leaving the rest about eighteen inches apart on each side the cane, from which a light crop may be taken the following season. Be careful in breaking the following spring to get the lower eyes as strong as the top ones which is easily done by good management. The second season's growth may be cut back to the same length as last, which will leave a cane of ten to twelve feet long and side spurs on the lower part or preceding year's growth. These spurs may be shortened in to the lowest good eye each, and disbud the present year's cane same as last. So far we have extended the plant perpendicularly, and we will suppose that we have a house of well grown canes two years old, reaching to the top of the rafters, and qualified to bear a good crop. The next season, allow each other vine to bear as heavily as is considered safe to color off the fruit, as these vines are to be removed the following fall. Those which are to remain may not be allowed to carry quite a full crop, which will ease and strengthen them, and the extra fruit borne on those to be removed will make up the deficiency, At pruning time remove those which have *borne* heavily, viz, each alternate vine, and cut back the side spurs to about a foot each, these will fill up the spaces next year, and are intended to become the permanent bearing branches; to be trained horizontally and spurred in as is usual with the perpendicular canes. Each year allow these horizontal branches to extend a foot or more according to strength, and as they approach the next vine, bear it somewhat heavily and take it out. By this method a roof capable of accommodating twelve or more vines in the ordinary way, will in course of time be filled by one, and if the house is a very long one, more in proportion. As many kinds cannot be grown in the same space, but as there are so few which are the very best, this will generally be of little consequence, besides a variety may be planted at the first, and a few sorts of the best quality will remain as permanent plants, care being taken at planting, that known good kinds are put in the right places.

I submit the above remarks for your censure or approval as you may deem best, being convinced in my own mind that it is more in accordance with nature, and will lead to more certain and permanent results than our present cutting away system.

TO CORRESPONDENTS.

Window Plants.—A great variety of plants might be successfully cultivated in south windows during the winter by a little attention, taking care that they are in a good state in the pot at the commencement, in good soil, and well drained. Care must be taken in the supply of water, as many plants are lost by watering too frequently, according to a periodical rule rather than the condition of the plant.—Water only when the soil is dry, and then enough to soak the plant should be given. Do not allow the superfluous water to lie about the bottom of the pot, as it is taken up again. As desirable plants for windows we might mention Chinese Primrose, scarlet Geranium, Salvia splendens S. gesneriæfolia, and others; Cuphea platycentra, Azaleas, Cinerarias, Daphne, Oxalis Bowii, versicolor, and others; Pentas carnea, Justicia speciosa, Stevia serrata, Linum trigynum, Chrysanthemums and Torenia, if the room be moderately warm. A few ferns would be a great acquisition, as their foliage is very graceful. Wire stands are now manufactured for the reception of such plants, and are light and convenient, and may be had at the seed stores. A few Roses are recommended at page 163.

S. B., Ind., proposes to check the curculio by means of the electric current, by surrounding the tree with a spiral coil of copper and zinc wire. Perhaps some of our readers who study the subject could offer a suggestion as to its practicability.

E. D. has handed us a few subscribers from Mobile, Ala., and we feel pleasure in stating that Patrick Devlin, at R. L. Yuille's, will act as our agent there.

W. Gain, Florist, has consented to act as our agent at Savannah, Ga.; we have received a list of subscribers from him, for which we return thanks; and C. Lutterloh, Esq., at Fayetteville, N. C.

The communication of the old Lancashire Florist Americanised, will appear in our next.

A.D., Raleigh, N.C.—Achimenes gloxiniæflora will be found in the list of one of our advertisers; also several other new and rare plants of New York and Philadelphia establishments. As the Florist circulates amongst those directly interested in plants, those having new plants for sale would save us many enquiries by advertising them, as we do not feel disposed to recommend particular tradesmen.

"A Subscriber," Philadelphia, has forwarded a communication; we hope the real name and address will not be refused, as we are always glad to know our friends.

☞ Owing to circumstances which we need not here explain, we have been obliged to publish this number without a plate; the difficulty of procuring a true representation, and the chances of its being imperfect are so great, as to overcome the benefits resulting from it. We shall try to make better arrangements in future.

THE

PHILADELPHIA FLORIST

AND

HORTICULTURAL JOURNAL,

A MAGAZINE OF

Horticulture, Botany, Agriculture, and the Kindred Sciences.

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FOREIGN HORTICULTURAL ESTABLISHMENTS.

The position of American Horticulture in comparison with that of older nations, begins to command some little attention along with other questions of social progress. In order to form a judgment on the matter, some knowledge of facts is necessary. We propose to offer a few remarks on the establishments devoted to the promotion of Botanical and Horticultural science in Europe; and while we are not disposed to cavil with those who wish to elevate American Horticulture, yet we do not wish to have foreign horticulturists depreciated without some acquaintance with the actual achievements attained in the art in foreign countries. An enumeration of the various institutions devoted to this beautiful branch of science, will, we trust, prove acceptible to our readers. Public gardens being the most important will be noticed first.

In England, there are botanical gardens at Liverpool, Manchester, Birmingham, Sheffield, Leeds, Cambridge and London; some of these do not receive apprentices, choosing only such as have learned the routine of gardening in private establishments. Of these, Kew Garden is by far the most extensive, giving employment to from thirty to fifty journeymen gardeners and a great many garden laborers. We shall not here enter minutely into the regulations or arrangements of this great depository of plants and temporary school of journeymen gardeners, as it will be the subject of a separate chapter at some future time, but will content ourselves with stating that now-a-days few gardeners can be found who have not 'been at Kew.' After all, it is but a poor recommendation, as proper habits of labor and a general course of horticultural training is not within the reach of each individual, so subdivided are the various operations.

Regent's Park Botanic Garden, London, is the next in importance. The garden of the Royal Botanical Society, a pleasant resort where such is most required, in the centre almost of a vast city, and yet entirely remote from the city dwellings by a vast enclosed park, where the Zoological Gardens are also situated. R. Marnock, the obliging curator of this establishment has displayed refined taste and skill in its arrangement and management. The exhibitions held in the summer months renders this garden celebrated as the resort of the *elite* of the metropolis. The Horticultural Society's garden is situated at Chiswick, a village about five miles south of London, also celebrated for its extensive exhibitions in the months of May, June and July. This is rather an experimental than a botanical garden, whose members are entitled to seeds of newly introduced plants collected for the society, and also entitled to recommend a gardener to be employed in the garden. By means of this society many new and valuable plants have been introduced; Kew Garden is only one mile distant from Chiswick, so that the visitor is at once in the very centre of horticultural attraction. The fruit catalogue of the Horticultural Society of London, prepared by R. Thompson of the society's garden, is acknowledged as one of the best authorities in pomological nomenclature; and John Lindley, Ph. D., is Vice-Secretary—but he casts all other officers into the shade, by his assumption at times of the duties of all the others, to the no small discomfiture of such as are vain of their peculiar prerogatives He is also editor of the Gardeners' Chronicle, and wo to the poor gardener who dare complain of injustice done him at the society's exhibitions, especially since the opposition paper conducted by R. Marnock has ceased to exist, which was set on foot to try to defend the working gardeners from this horticultural Hercules—but alas! capital has always got the upper hand of labor, and the gardeners and their journal were once more overcome. These were the days when theory and practice were pitted against each other.

We shall leave Chiswick and Dr. Lindley to enrich the Horticultural world—one with new and rare plants gratis, in return for the annual subscription to the society—the other with new and undigested theories and new systems of Botanical classification, each succeeding one superseding the former. The last and most elaborate he has drawn up, is a revision of that of the late talented Prussian Botanist Endlicher; but not considered by botanists as worthy to be followed out. It may be found in his Vegetable Kingdom, London, Bradbury & Evans, 1847; a work full of condensed and useful hints, the history and uses of plants—cost about seven dollars. Lindley and Sir Wm. Hooker are the two greatest British botanical writers; but as botanists, both are considered inferior to the venerable Robert Brown of the Bansian expedition—now curator of the Banksian Herbarium British Museum, and author of the "*Prodromus*" which bears his name. There is also a Botanic Garden at Chelsea; near London, connected with the Apothecaries' Society, a repository for medical plants especially; Mr. J. Moore is curator, author of a work on British Ferns. There is also a society called the South London Floricultural, but as yet no garden is attached to it. It serves to encourage the taste for Floriculture which is not within the province of the other societies—at least they do not attend particularly to the matter.

The Botanic Garden of Cambridge, connected with the University

of that place is well known, and contains a fine collection of old specimens of the most interesting plants.

The Botanic Garden of Manchester is also worthy attention, and furnished with spacious ranges of glass and a fine conservatory—and valued by the inhabitants of that great manufacturing town as a pleasant and healthful resort.

Liverpool, where trade and shipping would seem to absorb all minor matters, has also its Botanic Garden, which holds its fetes periodically to the great gratification of the inhabitants of a city rather crowded and smoky.

But we have yet to enumerate the Public Gardens of Scotland or North Britain, always proverbial for her numerous gardeners. That of Edinburgh is the most extensive, and celebrated as being the scene of the labors of McNab, whose successful cultivation of the Heath tribe has made his name familiar to most gardeners. He was one of the most successful cultivators of his time and respected by the entire profession. The collection of Palms at Edinburgh were considered to be second to no other in the country. Such was the respect entertained for Mr. McNab that a testimonial was got up and presented to him to which most of the gardeners of the kingdom contributed—he has since died and was mourned as one of the veterans of horticulture.

There is also an Experimental Garden in Edinburgh, formerly conducted by a son of the late McNab, (who is now curator of the Botanic,) where the other branches of the business are attended to.

Glasgow has a fine Botanic Garden, and the talented curator has enriched the science by many successful experiments, and by his means, many new plants have been introduced to the gardens and conservatories. David Murray is now a veteran in the ranks of horticulture, and is justly respected by all who have an interest in the science.

Much has been done for Botanical science in this enlightened section of Great Britain. Her Professors have been eminent and industrious—her working Botanists earnest and enthusiastic pioneers. And here let us not forget that the Botanist of Dundee, Wm. Gardner, the umbrella maker, has been called from the busy scene of life after doing more than any individual in his sphere to exalt the character of the Deity by bringing his work to the notice of his fellow-men, and unfortunately like most devotees of science he has died in penury, without provision or means being left for the support of his family. But Wm. Gardner will not be forgotten.

Turning to Ireland, we find Botanic Gardens are not wanting even here where there is so much destitution and misery. Dublin, the metropolis, has two Botanic Gardens. The Glasnevin Garden, sustained by and connected with the Royal Dublin Society, has an extent of about 30 acres, beautifully laid out and kept by D. Moore, A. L. S., author of a work on the grasses—there are here extensive conservatories filled with rare specimens. Professor Harvey lectures here during the summer season, he is known in America as the author of one of the Smithsonian contributions to knowledge, a work on American Algæ or sea weeds. Prof. Harvey is an eminent botanist, he visited this country a few years ago. There is also a Botanic Garden connected with Trinity College, of which Dr. Mackay has been curator for many years, assisted by Mr. Bain. This establishment has been long celebrated for superior skill, and old and full

grown specimens of rare plants. It is celebrated also for the success of an experiment unparalleled in horticulture. A Dragon tree had grown too tall for the conservatory and the sub-curator, Mr. Bain cut off a portion of the trunk, and by care and attention succeeded in getting the remaining parts to unite again. Prof. Allman lectures on Botany in connection with this institution.

Belfast, the most flourishing and most important manufacturing town in Ireland, has a Botanic Garden, consisting of about 18 acres beautifully laid out, two large conservatories of wrought iron and curvilinear roof, the first of the kind constructed in the country, as well as a house appropriated to the cultivation of Orchids, of which there is here an extensive collection. Many of them were presented by the lamented Capt. Crozier, one of the companions of Sir John Franklin, of the recovery of whom we have almost lost hope. A fine collection of plants are to be found in these grounds, which are justly ranked as the most attractive in their arrangement and keeping in the kingdom. The curator, D. Ferguson, assumed the charge of this garden, having previously been foreman at the Glasgow Gardens under David Murray.

We have now run over the principal Botanical establishments in Great Britain, and trust that they do not present so great a contrast with our own country as to create discouragement. America will yet have her flourishing Botanic Gardens, where American gardeners may be trained in the beautiful art of Horticulture. Then our Horticultural Magazines will not be filled with tirades against the British gardeners and gardening, but the achievements of the mother country will be appreciated as the ground work of our own systems, modified and directed of course by climatic experience and cultivated taste derived from the experience of foreign operators, adapted to requirements of our soil, climate and political character. Then the gardener will be respected as much as any other mechanic, or even professional man, if he has studied the sciences connected with his pursuits. And then the many social evils resulting from a wrong occupation of leisure hours shall no longer be complained of, for the improved moral tone of the community shall seek recreation in harmless amusements and pursuits. We hope we do not look too far before us when we think we see such a state of things approaching.

GRAPE CULTURE.

It is instructive to watch how practice often overturns a long established and fondly cherished hypothesis. The late lamented Downing once observed, that in America the notion was very prevalent that to grow fruits to perfection, all that was necessary was to "dig a hole, put in the tree, and leave the rest to nature." America, with its fertile and unexhausted soil and fine climate, is well calculated to originate such an idea; and it is not surprising that this, like many other fancies, should be carried too far. The knowledge that the different species of fruits and vegetables have to be, to a great degree, adapted to the climate in which they are grown, is of very recent origin.—England may glory in her Ribston Pippin Apples, her Royal Russets,

Hawthorndens and Nonpareils, but we can raise our own heroes, and point to our Newtown pippins, our Baldwins, Pennocks, and Northern Spys. So with pears in their Jargonelles, Chaumontelles and Gansell's Bergamot—they have all that Victoria herself could wish. We on the other hand, have raised our own Seckels, our Petré and our Chancellor, though some of the Doyennés, Bonchretiens, & Duchesses, still cling to the soil of their adoption. Proceeding on, we have the Grape in the same category. Foreign kinds, with the exception, perhaps, of the Golden Chasselas and Miller's Burgundy, refuse to acknowledge the potency of our "soil and climate" to bring them to unapproached perfection. They must await the same course of operations as our other fruits; to be carefully hybridised, or sported from seeds. In the mean time we have learned the lesson that the foreign grape can only be successfully raised under glass; the knowledge of this fact has become so wide-spread that graperies are springing up in the vicinity of every town almost, and the cultivators and cultivation of this fine subject threaten to rival the Dutch Tulip mania, or the more recent Multicaulis bubble, with this difference—that it promises to be more profitable. The gardening community, like all other sections of the human family, must have some hobby. It is well that it is looking towards a point so rational and practicable. We are convinced that notwithstanding the length of time the grape has been under glass cultivation, perfection has yet to be attained. There is not a subject connected with grape growing, from the formation of the border for the roots to the gathering in of the bunches, but will bear to be written upon again and again. There has been too much of dictative dogmatism—too little of actual experiment; and even where the latter has been employed, conclusions have been often too hastily arrived at, through a dim perception of the relation between cause and effect. The pages of the "Horticulturist" will bear witness to the great difference of opinion between our most distinguished horticulturists. The great majority of grape growers still prefer deep, rich borders; they know the vine to be a "*gross feeder*," and they have produced their finest fruits from soil loaded with carrion, and highly stimulating substances; others repudiate "the whole hog," contending that a moderately rich soil, all other circumstances being well arranged, will produce as fine fruit as the purse-exhausting animalised borders. R. Buist stands forth conspicuously as an advocate of the latter mode; a cultivator whose extensive experience has probably caused the "other side" to dread the advance of their arguments in reply.—So also in the various modes of pruning, training, airing and ventilating—still the same diversity of opinion exists.

There seems to be a general tendency to consider the vine generally as too severely pruned—one-half the cultivators arguing, physiologi-

cally, that a great abundance of stored-up sap for *next* year's crop can only be obtained by an abundance of leaves in *this*—the other pointing practically to the great weight of grapes their abundance of leaves have produced. So in the training—the best grape growers are advocating the horizontal training of the branches. H. W. S. Cleveland, generally the champion of the grape growers in the Chinese Museum in our city; W. Chorlton, that of the Metropolitan in New York; James Powell, of Philada.; and we believe J. F. Allen, the well known author of a treatise on the grape vine—they also have their theory and their practice. They contend that the vertical system, by having the top of the vine in the highest part of the house, *where the heat is the greatest*, from its ascending property causes the top buds to burst first, increasing the tendency to be always the strongest, and so to keep the crop irregular; while the horizontal system, assisting the regular bursting of the eyes while it obviates the difficulties attending the severe pruning vines on the vertical mode generally receive. This is rather a new subject, and well worth much consideration. The airing and ventilating of graperies is also raising a breeze. We believe that the knowledge of the fact of the grape mildew being often caused by injudicious ventilation, was first made known through our pages, in the articles of Mr. Saunders, on grape culture, and in the monthly calenders of our contributors. The fact, however, was known to our Philadelphia gardeners before. Mr. John Sherwood, formerly in possession of the extensive graperies erected by the late Nicholas Biddle, at Andalusia, had long ago observed it; but it seemed to be quite lost sight of. Still there is room for abundant further observation, and we should be glad to receive contributions on these subjects from those having them under observation.

The Victoria Regia.

I frequently receive inquiries from residents of the southern States respecting the growth of this fine water Lily in the open air. I take this mode of reply. The Victoria will grow in any place where the temperature is *regular*, of from 70° to 90°—sudden fluctuations of temperature are highly injurious to it. It delights in shade. The water in which it is grown ought not to be less than four feet deep, and ten feet is far better. Very few who have received seed from us have succeeded in germinating them. When subjected to strong light, we find a difficulty. In the shade they germinate in about twenty-one days. We judge from this that the seed usually germinates in its native places in deep water; and if obliged to sow them in shallow water, we shade them till they grow. If circumstances accord with the above, they might succeed in the open air in the South; in other cases I fear not.

THOMAS MEEHAN.

Observations of European Horticulture.

PARIS, July 6, 1852.

I furnished you with a few notes from London and now present you with my observations on what I observed peculiar in French Horticulture.

When we steamed and staged—or rather *dilligenced*—it from London to Paris thirteen years ago it occupied 2½ days, now only half-a-day. You sup in London and take an early breakfast at Hotel Maurice, France. In general horticulture France is behind England; though we think that the *Jardin des Plantes* at Paris, by its methodical system of arrangement takes precedence of Kew as a botanical school for the student—those systematic arrangements in the vegetable, medicical, and arborescent departments are in detail and explicit. They may not be in such beautiful and picturesque order as at Edinburgh but they are decidedly before Kew. The flower markets with their profusion of common place things may strike the uninitiated as grand, but to the partial eye the produce is inferior—but the detail and arrangement is good; every thing *got up* for show. The roses were displayed before us in seas of beauty, wave upon wave they come rolling along—but for intrinsic beauty the bouquets of Convent Garden surpassed those of the Flower Quays. The pine trees in the Garden of Plants are of far superior growth and more symmetrical than those in the vicinity of London. As you enter Kew you are struck with a good specimen of Abies Sabina with its peculiar soft sea green, but when you see the same in the Garden of Plants you have to pause and admire its clothed symmetry—so with many others.

The Rose Nurseries of Paris are behind those of Orleans, Angérs, and Lyons. Many of the establishments that have very formidable catalogues have very informidable collections comparatively, (with few exceptions) mere handfulls. Their taste in cultivating is however much improved; they propagate the fine kinds in quality by budding only. The following amongst many, were very beautiful in fact irresistible, Baron Halley, Noemie, Louise Peronet, Chateaubriand, Caroline de Sansal, Pius 9th, Julie Knœder, Mad. Trideaux, (an American variety and highly esteemed in France) Rosine Margottin, Geant des Battailles, Baron Prevost, Madam Rivers, Standard of Marengo, Julia Margottin, Auguste Mie, Eugene Sue, Doctor Julliard, Wm. Griffith, and some others, amongst the now popular class of hybrid perpetuals to which all the above belong. The Bourbon family, is also a great favorite amongst them; however, it was not an easy task to find rivals for Souvenir de la Malmaison and Boll's Henry Clay. Teas, Bengals, and Noisettes are overlooked; they are not generally hardy in England, (which is the great mart for French roses) some of the English nurserymen purchasing from 4 to 10,000 plants in a season. The gardens of the peasants, are judiciously stocked with a few select pears, a few grape vines, and a few select standard roses. The Railroad crossings and stations, are all decorated with roses and fruit trees; the latter cultivated as pyramids, trained in conical form, and with generally fair crops. They are more judicious in their selections than our American friends; they prefer few and fine sorts known as certain bearers; whereas many of our planters go over half the catalogue and take one or two of a sort. *That there*

are not over 25 sorts of pears worth general culture is the opinion of your correspondent.

Orleans, and its vicinity is one vast nursery and fruit garden, embracing thousands of acres densely cultivated. You pass from one little territory to another without knowing it; the division being a simple narrow track or path. Every foot has its plant, and every tree its crop, cultivated either for the beauty of the plant, or the produce. I did admire the dexterity of the laborer, with his great *Lochaber axe* hoe, he cut the weeds and drew the soil to the plant with the same movement—close labor from 4 A. M. to 8 P. M. Weather very dry and hot—they use the watering pot freely under a warm sun, to as late an hour as ten o'clock. They preferred morning watering.

The banks of the Seine, between Orleans and Nantes, are cropped with the grape. The fruiting vines are all planted on dry sandy declivities, at about 3 to 4 feet apart, and trained to stakes not over 5 feet high. There are only three sorts principally grown; the white and rose chasselas and the maurillon, a variety of Burgundy; they have an annual light dressing of manure, heavy manurings they consider injurious to the flavor of the fruit and quality of wine.

The general culture of the country has greatly improved during the past 10 years, the grain crops were clean and well cultivated, and held in small allotments, which was evident by the various patches of wheat, rye, and oats; the vineyards appeared to be under similar tenure. The face of the country is naked and monotonous, except where it is varied with a cathedral or monastery, or some of the many *chateaus* of the Bourbons. In the south, their favorite ornamental tree is the *Magnolia grandiflora*, and it is also subjugated to the unmerciful handling of the knife. Every tree and bush must be pyramidal, and with the present subject it is certainly much out of place, and indeed so it is with the majority of their pear trees, which their decrepid growth and comparative paucity of fruit clearly indicates; I know a Duchess d'Angouleme pear tree, in West Philadelphia, that never suffers castigation, and returns to its merciful owner four times the quantity of fruit that those trees of half a century seemed to produce. I was much interested to know the age of the oldest pear trees, that were on the quince stock, and was gratified to be shown a lot reputed to be 100 years old; I therefore noted it down that the quince stock did not impair the longevity of the pear. We do decidedly protest against the unnatural system of pruning the pear, both summer and winter, as adopted by the French—lauded by some of the English, and applauded by a few of the fruit growers of our own continent. We believe that pears and apples can be more profitably grown in this country, than in either England or France, and it is no chimera to predict that Pennsylvania will yet grow more of these fruits than both of the above countries. We have a peculiarly constuted climate to enable the earth to make its yearly return to its cultivator.

Exeter, England, July 12th, 1852.

England has been termed a garden, and we now say that Devonshire is the garden of England; where we have taken a few moments to draw breath, after having visited the great horticultural show at Chiswick Gardens on the 10th inst.

The day could not have been rivalled to show off the fashion of the great metropolis, the floral and the fruitful products of her gardens and vast conservatories, to more supreme advantage than that of the 10th of July, 1852. Early in the morning, the whole vicinity was alive with waggons and vans with their towering loads of plants and carefully protected fruits, (no vegetables exhibited.) The various Tents covered nearly two acres; the plants were nearly a repetition of those exhibited at the Regent's Park, with the addition of a few more competitors. Every contributor arranged his own productions, under the directions of the renowned Thompson for fruits. The new curator, Mr. Gordon divided out the spaces for plants, whilst Lindley the Hercules of the age in the science, rested under the cooling shade of a birch with his various couriers in attendance—by 10 o'clock all must be, and was arranged. I was highly privileged in being permitted a spectator of the whole, and profitably admired the keenness of perception and very critical eye of many of the contributors in arranging the various colors of their competing plants. Pine Apples were deposited in quantity, the heaviest 7lb. 10 oz. Of Fuchsias, the best reds were Sir J. Falstaff, Voltiguer and Alpha. Fancy Geraniums, Fairy Queen, Jenny Lind, Madam Rosati, Albonii, Delicatum, Beanti, Clementine and Perfection were the most remarkable. This lot of plants was one of the centres of attraction, they were from 2 to 4 feet in diameter. The air plants the same, or nearly so as those of Regent Park, and showed evident signs of being on the wane. Grapes of surpassing splendor, the only new sort was Judson's, Richmond Villa, bunch, medium size; berries, very large, round, oval, of a reddish black color. Strawberries, very large, principally of the British Queen variety, on which Kittley's Goliah appears to be an improvement, and looked better than the faulty green, or half ripe points of the former. In Cherries, Knight's early black was the leading sort. Seedling Verbenas, Scarlet King, British Queen, (white,) Drummondii, (mottled) were worthless, and would not have brought over ten cents each in Philadelphia market. There is a load of Achimenes! Six large baskets, each 12 feet in circumference, and I suppose each basket contains 6 plants, and good at that; all eyes are turned towards them, splendid! magnificent! grand! fine man! look Patrick!! were the exclamations of as many individuals. But, behold! to my silent astonishment, there was only one plant in each basket, and that plant was grown in a 12 inch shallow-pot—put that in your pocket Achimenes growers.

The rush was now to the Achimenes tent, where with the favorite old sorts I saw the following new ones: patens major, dark violet; longiflora major, large blue; Marguerite, pure white; Warsewiczi, blue; Khelii, rose; and Backmanii were worthy of note. A plant of *Lisianthus Russellianus*, three feet wide and as much high, with its tulip-shaped flowers, I set down as the best grown plant at the exhibition, all its critical habits and nature considered, but was disappointed on my visit in the afternoon to find it only third best. Punctually to the hour the bell tolled 10 o'clock, all and every one moved out at one gate, when the judges of the day entered by another; their deliberations were then carried on *silent and alone* till 12 o'clock, when the Fellows of the Society were admitted.

The public at five shillings a ticket followed at 2 o'clock, where-

into they continued to pour by the thousand till 5 o'clock, covering the grounds of the garden and the contiguous grounds of the Duke of Devonshire, which are thrown open on such occasions. Music from two of the finest bands enlivened the scene and kept all in motion, the tents and their vicinity as crowded almost as the Philadelphia shows are from 8 to 10 o'clock in the evening. Specimen plants of the new Sax-Gotha and Fitzroya were displayed, but not of sufficient size to show their habit. In the ground the most graceful and attractive of the new evergreens were *Thuja Goveniana* and *Cupressus funebris*. I left these exciting scenes with the conclusion that London was the place for patience and flowers—Philadelphia for fruits and temporary excitement. R. Buist.

New Introductions.

The conservatories of Philadelphia are still receiving novelties in the horticultural line. A few days ago we observed a fine importation of new and select plants by an amateur, amongst which we noted *Capania grandiflora*, a splendid Gesneriaceous plant, producing large flesh-colored flowers, delicately marked with rose-colored dots; in shape and size equal to the largest of our Gloxinias. *Pachira* (Carolinia) *alba*, a plant of the sterculiaceous tribe, a splendid plant with beautiful digitate leaves; the genus *Carolinia* is rejected for that of *Pachira* of Aublet—the former is a genus of the younger Linnæus. The plant attains the height of a tall tree. The celebrated monkey bread tree, *Adansonia digitata*, is found in the same group. We noticed also *Alloplectus speciosus*, a Gesneraceous plant with beautiful foliage, and no doubt will prove an acquisition to this already showy and extensive tribe.

We shall notice many others of this rare lot before next month.

Proper Names of Plants.

We observe that a little more attention is now given to the accuracy of Botanical names. A communication on the subject of the word *Clerodendron* has been received. Although we never doubted that the above was the correct method of spelling this word, yet we believe we have written it Clerodendrum, on the authority of some author. We however cannot now find any authority worthy of reliance, making of the Greek word *dendron*, tree, dendrum, which has no meaning. We adopt Clerodendron on the authority of Linnæus the author of the genus; Loudon, the author of the Hortus Brittanicus, and Lindley, of the Vegetable Kingdom. Many others might be quoted, but we recommend these to the attention of the compilers of the Hortus Americanus, New York.

Notices of New and Select Plants.

The taste for new and rare plants has become so general in the neighborhood of this flourishing city, and indeed throughout the entire Union, that information of the character of those novelties brought before the Horticultural public from time to time by the Nurserymen and Florists, has long been considered an important portion of the duties of a Horticultural periodical. We have observed in several cotemporaries lists of this kind, but we differ most materially with some of them in our conceptions of what may be esteemed new and select. It is not our intention here to enter into a criticism on the kind of matter which any journal may think fit to present to its readers; it is entirely their affair, not ours. It shall be our aim, however, to notice only such novelties as we deem worthy cultivation, or such as have been actually introduced here—gleaning our information from reliable sources, and giving condensed accounts of their habits and character.

We cannot commence the series better than by laying before our readers an account of the

AMHERSTIA NOBILIS,

N. Ord Leguminosæ.—A native of the Birman Country.

The first specimen of this splendid plant as we stated in our last number, had been imported by F. Lennig, Esq., of Philadelphia, and is in a flourishing condition. When first introduced to Britain it was looked upon as the greatest novelty of the day, the great Horticulturists of the metropolis of the world, vied with each other in their anxiety to see it produce its splendid racemes of flowers. Its introduction had been attempted several times by Dr. Wallich, the describer of the plant, but without success, until the Duke of Devonshire sent Mr. Gibson into the Birman Country on a special mission to procure the *Amherstia*. This undertaking proved successful, as Mr. Gibson introduced to the Conservatories of Chatsworth, a fine living specimen. But strange to say, with all this labour, expense and care, the specimen at Chatsworth failed to produce flowers, until at length a much younger plant introduced in 1847, by the attention of Lord Hardinge to the Conservatory of Mrs. Lawrence, at Ealing Park, near London, by careful and scientific skill in cultivation bloomed for the first time. There were also, plants introduced to Kew, Chiswick, and Frogmore Gardens, about this period. A similar fact may be observed with regard to that king of the Proteaceas; *Stenocarpus Cunninghamii*. The first specimen of this fine plant introduced to Kew Gardens, although it flourished and became a fine and healthy specimen, failed to bloom, while a small cutting of one foot high, no doubt emanating from one of the first introduced plants, furnished a beautiful bloom, in a temperate house at the garden of the United Gardener's Society, Chelsea. The form of the flower of the Amherstia, is somewhat peculiar, although a Legumiuous plant as may be easily seen by its pod, its flowers do not at first sight seem to be of the Papilionaceous or butterfly form, so common in that order. In a description of the figure of the plant given in the "*Flore des Serres*," of Van Houtte; which was copied from the original drawing in Dr. Wallich's "Rare Asiatic Plants," a copy of which we believe is to be found at the Academy of Natural Sciences in this City; we find the following remarks: A Martaban tree, forty feet high, with deciduous stipules, and large abruptly pinnate six to eight paired leaves;—

Flowers in large, beautiful, pendulous, scarlet, axcillary racemes;—petals; the lateral ones, reddish, and the hinder ones, spotted with yellow round eyes on the apex;—Pod, coriaceous, red.

It is still the only type of its genus, and may be grouped with the genera *Jonesia Humboldtia*, *Afzelia*, *Anthonota*, *Palovea*, *Eperua*, *Parivoa*, *Macrolobium*, &c., of the same nat. order and group CŒSALPINIÆ.

In its general appearance and foliage it recals to our minds the *Brownea* of S. America, a plant, also lately introduced here, producing beautiful heads of bright scarlet flowers, suggesting to the superficial observer, a connection with the Rose-family. With which order, Botanically, Leguminous plants are closely connected. Two species of Brownea *B. Coccinea* and *grandiceps* are now to be found in the City Conservatories of Philadelphia; and this new acquisition makes up three individuals of this natural family.

The name Amherstia was adopted by Wallich in honor of the Countess of Amherst and her daughter, Lady Sarah Amherst, both zealous and accomplished promotors of Botanical Science in the East Indies.

Dr. J. E. Planchon, says in his description of the plant in Van Houttes '*Flore des Serres*,' from which some of the foregoing details are translated.

"Its whole history is in unison with the grandeur and beauty of its attractions. Its flowers adorn the altars of the God of the Birmans. Its name recals the graces united with science. Its discovery, introduction, and publication, are due to the generous patronage exercised over Botanical Science by the Hon. E. I. Company.—In conclusion, its flowering at Ealing Park, constituted one of the greatest triumphs which Horticulture has for some years inscribed on her annals."

CULTIVATION.

Mr. Smith, states that it is of great importance to protect its leaves against the direct rays of the sun; as the membranaceous texture of these organs, renders them very sensible to the effect produced by sudden evaporation. The defects observable in this respect, are caused perhaps, by too dry an atmosphere, or by the insufficient quantity of liquid absobed by the roots. It appears that the greatest care has not been sufficient to protect the edges and top of the leaves from being burned and scorched; thus imparting an unhealthy appearance to the tree. But this is an evil from which Brownea and several other plants, furnished with leaves of a similar texture, often suffer. The specimens of Amherstia in the Bot. Garden, at Calcutta do not even escape this defect. A perfect drainage, and soil permeable to fluid, are indispensible condition to its successful cultivation. It may be propagated by cuttings placed in a hot-bed without a bell-glass. It is not likely the plant will produce seeds in our houses. *Trans. from V. Houtte's "Flore des Serres."* Should the plants suuceed here so as to flower, we are disposed to believe that it would ripen its seeds in our climate.—Ed.

MICROSPERMA (*Eucnida*) BARTONIOIDES.

Nothing can be more humiliating to American Botanists, who are anxious for the promotion of the science on this great continent than the fact that the novelties discovered here are received second hand from European Nursery and Seedsmen, and presented to their notice beautifully figured in European periodicals. Or perhaps, like true

citizens of the world, they rejoice that since there is not sufficient taste and enterprise to attend to these things here, they are attended to elsewhere.

Our attention was drawn a few days ago to a plant exhibited by R. Kilvington of this city, which we knew we had seen figuredeas something new and rare; it was *Microsperma bartonioides*, which seedsmen have had for sale as an annual under the name of *Eucnida* and this seed was imported from London; the plant is from Texas and Oregon transported to Europe to be transmitted again to its native country, labelled and priced. It is, however, a pretty plant, allied to the Loasa but not quite so pungent, as that well known creeper, *Loasa aurantiaca*. It is figured in the "Flore des Serres"—from which we have translated the following:

Microsperma bartonioides, better known under the title Eucnida is a Mexican plant, which appears to have flowered first in the Bot. Garden of Munich, introduced by Karwinski, furnished with large golden yellow petals and beautiful tufts of stemons, with delicate filaments, being of annual duration, it flowers in the open air in our climate. (Belgium.)

Window and Yard Gardening.

Dahlias.—If you have any of those in your flower border, you will be able to note with accuracy when the first frost occurs, as they are very susceptible of cold. When their beauty is past, take up the roots and lay them in a dry, airy room for a few days with the stems down, to prevent moisture lodging about them, then store them away in a dry cellar for the winter; any place that will preserve potatoes will also preserve these roots.

Fuchsias.—As these go out of flower reduce the quantity of water at their roots; prune *in* the side shoots, they will keep well any where out of the reach of frost, provided they are at the same time kept dry.

Scarlet, or Fish Geraniums will keep in a similar manner.

Verbenas.—A small box filled with rooted runners is perhaps the simplest way of keeping them over winter; they will stand a good deal of cold and do well, although some distance from light, but in either case must receive little or no water.

Camellias require a freer circulation of air than they can receive as a window plant, consequently they do not give much satisfaction when kept in close rooms. Do not give them much water at present until the flower buds show symptoms of expanding. Watering is an important item in the management of plants, and its improper application is the most fertile source of disappointment. At this season when the days are short, sun less powerful and temperature low, plants do not use much water; Camellia buds often drop off from the plants being kept too wet and confined at this time;—of course, there is a medium—they will also suffer if allowed to get as "dry as dust."

General Remarks.—Always when you water a plant see that the surplus runs freely out at the bottom of the pot; if it does not, you had better turn it out and re-arrange the drainage. Even plants that delight in moisture will not thrive when it stagnates about their roots.

Green bugs, green fly, or *Aphis*, will come upon plants, but it is an easy matter getting rid of them, either by putting them in a close room filled with tobacco smoke, or, a simpler method, pour boiling water over tobacco, (refuse stalks from the manufacturers answers the purpose) then dilute the liquor with rain water until it appears slightly colored; lay the infested plant on its side (if in a pot) and distribute the water with a syringe or through a fine rosed watering can, turn it round so that every leaf receive a portion; one or two such applications will generally clean the plants.

Sponge over the leaves of the plants frequently, leaves are their respiratory organs, and they cannot perform their functions if coated with dust. Do not neglect the underside of the leaf; indeed, it is more important than the upper surface.

As a matter of cleanliness and neatness, the pots are generally placed in saucers; after watering always empty out the surplus that has come through the soil, otherwise it will prove injurious to the roots at this season.

Some plants accommodate themselves better than others to window culture. The Cactus family form a very interesting and easily managed collection, more especially the dwarf kinds, such as *Mammilaria*, *Melocactus*, and *Echinocactus*, they are eminently *cleanly* plants, requiring very little water, and never making "a mess" with falling leaves and buds. Akin to these are the different varieties of *Aloes*, *A. nigras A. Humilis*, *A. variegata*, *A. retusa*, &c. So is the *Sempevivum*, and *Mesembryanthemum* tribe, all requiring much the same treatment as Cacti, and equally interesting in their diversity of foliage and peculiarity of growth.

The Cyclamen is a beautiful family, flowering all through the winter; some of the varieties are very fragrant. The Chinese Primrose also suits well, so that it is not killed with too much water. Then there is the universally beloved Mignonette, also *hydropathically* inclined. The Oxalis or wood-sorrel family also deserves a place, especially the species *Boweii*, *lutea*, and *versicolor*; *Lachenalias* are also beautiful, both in color and flower. Then for evergreens there is the classic Myrtle, the Sweet Bay, Chinese Azaleas, and the fragrant Daphne. A place must also be retained for Mosses, Lycopodiums and Ferns, the flowers of which are truly "born to blush unseen. No matter what peculiar hobby you ride, whether in oddity of growth and formation, variety in foliage or the beautiful in flowers, Flora can accommodate you, and a few of her novelties will be noted occasionally in these papers. D. D.

Mr. Editor:—It is to be very much regretted, that among the numerous intelligent gardeners and amateurs of this city and its neighborhood, so few are found who pay any attention to the study and collection of native plants. We are justly celebrated for the liberal importation of foreign plants and hybrids, from the noble Victoria and Amherstia to the last seedling Verbena; but in the neighborhood from whence Bartram sent plants which were the delight and astonishment of Collinson, Dillenius, Gronovius and the great Linnæus, there are very few who think of spending a few hours in the collection of our indigenous beauties. A premium is offered by the Pennsylvania Hor-

ticultural Society for a display of indigenous flowers, but there is little or no competition.

How little, for instance, is known of our native orchids; the Orchis, the Habenaria, the Cypripedium, or the Spiranthes and Goodyera;—we see the Cheirostylis marmorata and Anechtochilus argenteus imported from foreign nurseries at respectable prices; but who cultivates Goodyera pubescens, equally beautiful in flower and foliage? The native Cypripedia are among the most beautiful of this beautiful genus, yet I do not believe that a single plant of C. spectabile is to be found in this country. Peter Collinson thought "it must be a fine sight to see the White Calceolus near three feet high;" but very few gardeners in this neiphborhood have ever seen it in flower.

Looking over a catalogue of one of the largest nurseries in Europe, I find advertised *Anemone multifida* and *virginiana; Thalictrum anemonoides; Mitchella repens; Lobelia cardinalis* and *syphilitica; Claytonia virginica; Penstemon pubescens; Spigelia marilandica;* PODHOPAYLLUM PELTATUM, and hundreds of other natives which are unknown to or entirely neglected by us.

Any one walking now into the fields and woods, or by the brooks and marshes, would be delighted with the number of beautiful Asters, Solidago, &c., which he would see in bloom. It would seem, sir, that to be valued at all, a plant must have its credentials from Mr. Van Houtte, or from the Messrs. Henderson, and cost few or many francs or shillings.

A moderate sized bed in your garden might be planted with natives so as to have a continued succession of bloom from early spring until frost; and they have the additional merit of flourishing best when left to take care of themselves. Very few visitors will know when looking at your beautiful variety of herbaceous plants in bloom, that they are only "wild things," except perhaps a few of your lady friends—and those only of them who go to the country in summer, instead of *improving* their health at Newport or Cape Island.

At another time I will have more to say on this subject, when you can afford me space in your pages. PHILARVNSIS.

Retrospective Criticism.

Cultivation of Cacti.—In the first part of your contributor's "notes," he recommends when seeds are sown, to cover the pot with a piece of glass. In the majority of cases, I think that the plants would damp off as they came up, although they might come up sooner. I see that the London Horticultural Society offer a premium at their spring show, for six tall Cacti in flower, which our Society would do well to imitate.

Achimenes.—We hope that next September we will see several collections rivalling the growth of those shown by Mr. Ingersoll's gardener, which were certainly better than any ever exhibited in this city, although in timber rivalling the Calceolarias Mr. Buist saw at the London show.

Window Gardening.—Few plants seem to succeed as window plants; chiefly, perhaps, from the want of proper light. Fuchsias get very leggy, indeed they seem to endeavor to turn into climbers. The

same with Geraniums, unless kept well topped. Roses are very apt to be destitute of leaves, and Heliotropes won't flower; but run into long growths like the Fuchsias. Still, here and there one sees a good collection of plants grown in dwellings, though no especial reason appears why they should be better than others.

The list of Foreign Grapes does not seem to be brought up to the present time, as we know many grapes cultivated in this vicinity, which are not enumerated there. Much difficulty however, has always been experienced by persons not familiar with the science in recognizing plants and fruits from descriptions. We hope Mr. Powell will favor your readers with a supplement, bringing up your list to the present time.

Your fellow-workers in the fields of science don't seem to agree yet about the sap question. I think the best way to serve our New York neighbors is to let them write away; they generally "show themselves up" sufficiently, without your correspondents pointing out their errors.

The Aspects of Agriculture in Great Britain are certainly very interesting. The proposals of remedies for the potato-rot, Mr. Smyth's alternate system of wheat growing, the contests of reaping machines, occupy the attention of the societies and papers there, to a very great extent. The palm is generally awarded to the reaper of Mr. Bell, a Scotchman, first made some twenty-five years ago, but like many things offered to the old fogyism of farmers neglected until now. It is driven by horses behind the machine, and consequently can charge right through a field of grain, while a path must be reaped for the American machines to begin on—and it delivers the grain better. The discoveries of M. Esprit Fabre, in relation to the conversion of Ægilops ovata into Triticum, is another evidence of the use of science in practical matters.

The inhabitants of our Southern States are certainly favored as regards open air cultivation. We have heard of Camellias growing in the open air in South Carolina and Georgia to a very great size; and the roses, such as Chromatella, Triumph of Luxemburg, &c., which require shelter here, become enormous specimens.

A good collection of fruits will be much more certain, now that we have a Pomological Society organized. It is certainly much more satisfactory to have apples and pears recommended or rejected by such a society, than for individual growers to take upon themselves to publish certain varieties as unfit for cultivation; especially as we find that "doctors disagree" on that subject as well as others.

Pennsylvania Horticultural Society.—The exhibition this year was certainly a very superior one. The number of new plants shown was greater than we ever recollect, though very few persons knew of their whereabouts on the tables, owing to the plan of arrangement. A table might be set apart for these, and then greater facilities for examining the many novelties introduced here by our nurserymen and amateurs would be afforded. In plants there was not much competition. We heard some complaints about the awards for cut flowers; but it will not do to carp at the judgments of infallible committees.

BROUGHAM.

Horticultural judges in Europe, according to a correspondent, conduct their deliberations "silently and alone." We recommend their example to horticultural judges in America.

Floriculture—"The Lancashire Heroes,"

BY WM. CHORLTON, STATEN ISLAND, N. Y.

In reading over your September number, I was somewhat amused at your pleasantry respecting the properties of Florist's Flowers and the "Lancashire Heroes." Having been "born, bred, and brought up" in that county of "Baiziers," (Bear's Ears, *Primula auricula*) Polyanterns ("*Primula elatior*,) and "Big Tayberries," (Gooseberries,) though not claiming to be a hero amongst them, yet I may perhaps be able to assist some little in disseminating a trifle of experience in the cultivation of their justly esteemed "hobbies."—Heroes you well name them, not aspiring to glory in the battle field, on the ocean, or in the senate, but true heroes in rural life, contented and happy, good natured and hospitable, so long as the cravings of nature are satisfied, and a few shillings to spend on their favorite flowers and gooseberry bushes. No better example of the blessings of rural life, well directed, can be found than by a sojourn amongst this intellectual, but often neglected class, where trumpet tongued the voice of contentment would speak home to the mind of many a dissatisfied and grovelling wealth seeker. Here will be found a clean garden plot, well filled with the useful and ornamental—each portion allotted off by straight lines and right angles into beds of sweet herbs, vegetables, and next to his industrious family and honest wife, his greatest and only treasures, Florist's Flowers Upon these he fixes the whole bent of his mind during his leisure moments. Here after the day's hard toil he may be seen when the sun goes down, and in the morning when the sparrow wakes. He rides his hobby with an enthusiasm and perseverance to himself only known. His only combativeness being a pleasant rivalry with his neighbor, who in his turn strives equally hard for the Copper Kettle or New Spade at the next exhibition, when and where he may be seen and heard discussing the nice points and beautiful detail of perfection in form, color and size, with the greatest precision and quaint eloquence. Although moving in so humble a sphere generally, this class of men are capable to a wonderful degree of appreciating the beautiful, and have fixed the criteria of perfection so accurate that even careless observers have been forced to admire, and all have acknowledged their standards of excellence. An impulse has been given to improvements which have become of world wide renown. If examples are wanted, only compare the Dahlia, Pink, Carnation, Polyanthus, Auricula, Pansy and many others with the originals, indigenous or exotic, and we have ample proof of the benefit that this class has assisted in conferring on our more wealthy lovers of flowers, who have been reposing on their beds of down, while his coarse (and often only) fabric of a coverlet has frequently been protecting his treasured pots, to his own discomfiture. Neither is it alone in the improvement of flowers that these men have become a benefit to society, for where the mind constantly delights to dwell, so is the character of the individual fixed, and the study of flowers has a beneficial, moral and religious tendency, producing social, domestic and kind feelings, and leading without sectarian bickering the mind "through Nature up to Nature's God." Again, a mind that is led to appreciate and cultivate these discriminations is naturally, and imperceptibly as it were, led on to order and neatness in all its actions, and ultimately a well directed performance

of all things. The influence of such characters is great over their neighbors, for one neatly kept garden leads to imitation in others, and imitation leads to improvement. Where the garden is treasured there will be a well guided household—this is clearly demonstrated in the dwellings of the florists, for however coarse the food or meagre the furniture, there is a clean "hearth-stone," a clean tidy wife and children, everything orderly and neat, social comfort, and domestic contentment has there its abode. Frequently have I known the dissipated collier and his slovenly wasteful wife reformed by the influence of these examples. When neither the stern reasoning of the reverend divine, nor yet the austere lectures of the indomitable Mrs. Pardiggle (as Dickens has it) could make any impression, the country florist has accomplished the reformation by the sight of his beautiful spot, a little friendly chat and the gift of a few flowers. It would be well if we had more of these "Old Fogies" around our different neighborhoods; surely the force of example is needed. If here and there throughout the country their little paradises were dotted about they would look like something celestial amongst the innumerable slovenly lots. May we see the time when an ill kept cotter's garden will be a novelty. And here a word to the committees of Horticultural Societies:—Give a list of prizes for the productions of small gardens at your exhibitions, it has a great tendency to encourage those of little means, to cultivate their small lots. The following brief remarks may be of service to some of your readers who are fond of winter and early spring flowers:—

Place one or more frames, according to means or space at command, in a sheltered spot facing the sun, loosen up the bed below, a spade deep, and fill in eight or ten inches of good mould; obtain a quantity each of, Polyanthus, Primrose, Neapolitan, or other sweet violets, (the Neapolitan is the best,) Ten Week or Intermediate Stock, Wallflower, Auricula, Pansy, Snowdrop, Crocus, Hyacinth, Early Vanthol Tulip, Sweet Alyssum and Mignonette. The two last may be carefully lifted with balls of earth about the roots, though it is better to sow them in the frame about the beginning of September. Plant at the distance of six to ten inches apart according to habit of growth, give a good watering to settle the soil and fix the roots, keep the glass close and shaded for a few days, afterwards give air freely in bright and mild weather. Line the outside of the frames to the top about a foot wide with earth or litter to keep the frost from penetrating, and when severe weather sets in; cover with straw mats or other convenient material, at night; give air freely throughout the winter on bright days, avoiding cold cutting winds, and close up a little before sundown, to retain some warmth for the night. At intervals when the soil gets dry give a good soaking of water, not little and often, but a sufficient quantity to pass down to the bottom roots. Allow the soil to become dry again before more is applied, always taking advantage of a fine morning for the application. In severe weather it is better to be too dry than too wet. Attention to these little points will ensure success, and without the aid of a greenhouse—by these means a fine display may be kept up throughout the whole winter, and a perfect dazzle in early spring. There are few persons who have not these means at command, and those who have not tried it will be well satisfied with the results. A little stock of the greater part once obtained will serve from year to year, so that the first ex-

pense, which is but a trifle is nearly the only one. The above operations would have been better performed a month ago, as all would now be established, but it is not yet too late to prevent success.

There are few of our city yards in which there is not sufficient convenience for this, and what source of attraction would it be to the family of every house to have such a fair spot attached, besides the advantage to health, by coaxing the inmates to take more out-of-door exercise, instead of being imprisoned in close rooms, breathing a parched and heated atmosphere. Let none of your fair readers hereafter complain of not being able to obtain that emblem of her own loveliness, a bouquet of sweet flowers in the winter, so long as the opportunities of obtaining it are so easy and cheap.

The above few hints are at your service, if of any use, and at some future opportunity you shall have something more comprehensive in flower growing.

CALENDAR OF OPERATIONS,

FOR NOVEMBER.

Written by Practical Gardeners, for the Philadelphia Florist.

HARDY FRUIT.

Planting Fruit Trees.—Where planting is intended to be done this fall, it had better be proceeded with without delay; if not done this month, it will, as a general thing, be as well to leave it until spring. In preparing holes for the trees, they ought to be made large enough to allow the roots being laid evenly out, without bending or twisting them in any way; cut all ragged or bruised ends of roots with a sharp knife; avoid deep planting, many trees are ruined from this cause; rather err on the safe side, and keep the neck of the tree a little elevated; see that every crevice between the roots is filled with soil, and made moderately firm. Finish by heaping a small mound of earth over the roots, which keeps the part steady and throws off heavy rains. In very exposed situations a stake may be necessary to prevent the wind blowing them about and disturbing their roots.

Pruning.—This is an operation generally considered of easy performance. As understood by some, it consists in sawing off all the branches to a certain height; others again satisfy themselves by cutting out a few branches here and there, without troubling about the "how" and "wherefore," feeling confident that a fruit tree must be pruned and trimmed in some form or other to keep it alive. A third party practices the "shortening in" system, which "being interpreted" means cutting a small piece from the point of every shoot. Those, however, who have studied the subject attentively, go more cautiously to work, knowing that they are about infringing upon the laws of nature and breaking in upon the beautiful system of harmony and sympathy between branches and roots, and every branch that is cut must be either for or against the well-being of the tree. Pruning is a manipulation requiring skill and experience, and if in some cases "trees are lost for want of pruning," there are not wanting others that are "killed with kindness" in this respect.

If a judicious system of disbudding and summer pruning were practised, there would be little occasion for winter pruning; or, were it

possible to place a tree in such a soil and situation that it would make only a moderate growth of well matured short jointed wood, then probably no pruning would be requisite. It almost seems a negative practice to allow a tree to make a large quantity of wood during summer and then cut the greater part of it out in the annual winter pruning. The object in pruning fruit trees is to regulate and enhance the supply of fruit; if the deficiency of fruit arises from a preponderance of wood growth, the evil will be increased rather than diminished by winter pruning. It is an axiom with horticulturists that trees are weakened by summer and strengthened by winter pruning. The time for winter pruning may also be regulated in a great measure by the condition of the tree; if pruned immediately on the fall of the leaf, the shoots will be stronger in the succeeding season than if the operation had been delayed until early spring—hence pruning is often deferred until the tree is nearly in leaf in order to diminish its luxuriance. This arises from the fact, that during winter the plant still continues to absorb food by its roots, the sap thus introduced into the system is equally distributed over the tree; if, then, we defer pruning until spring, we cut out and throw away a very large amount of the sap that has been thus accumulating, and in consequence the plant is weakened. On the other hand, if pruning is performed early in winter the extent of branches is lessened, and the sap collected by the roots deposited in a smaller space, the buds from which will push out and grow with redoubled vigor.

The operator must also be familiar with the modes of *bearing* of different trees. The grape, peach, fig, &c., fruit on the young growth; the pear, cherry, apple, &c., principally on spurs from older wood.—With respect to the former, it is necesssry to retain enough of last year's growth to secure the crop. The principal flow of sap is always directed to the extreme points of branches, to the detriment of those situated nearer the stem; but by pruning off a portion of these extreme branches the sap is more equally distributed, and all parts of the tree more nearly shares alike. It is for want of timely pruning that so many peach trees and grape vines run up with long naked stems, bearing a few branches at the top.

Having thus slightly glanced at some of the principles of pruning, we will not extend these remarks at present further than to observe that, although as a general rule early pruning is preferable, yet it will often turn upon a point of mere leisure and convenience; grapes, however, are exceptions, they should always be pruned in November, 1st, because there is liability to bleed if delayed till spring, which, altho' we have never found to be injurious, may as well be guarded against. A more important reason is the additional stimulus the pruned plant receives from the accumulation of sap during winter, causing it to advance rapidly in growth and steal a march upon the season's vegetation—a matter of importance where the summers are short.

Figs.—These will require to be protected from severe frost. Having tried various means for their preservation, we would recommend the system of pegging the branches down as low as can be done conveniently without breakage, and covering over and through them with leaves. Throw a few old pea sticks through them to keep them together; we have never failed in getting them safe through the winter when so protected. S. B.

HINTS FOR NOVEMBER.

The winter season should be for all things one of rest, and in every department of horticulture this should now be the prevailing idea. Plants which have not ceased to grow, should be encouraged to do so, by having less water given to them, and by keeping them in a drier atmosphere.

In the Hothouse, all that will be required is to maintain a regular temperature of 60° for the nights, and 70° by day, keep the house moist by pouring water over the pipes, or keeping pans of water on the flues, and water only when the plants might otherwise "flag" for the want of it. It is the best time to pinch back plants desired to become specimens, as pinching back when plants are growing strongly weakens them. Give air only when necessary to keep down the temperature. Fresh air not only assists the growth of plants but encourages them to grow. Plants live, but do not grow in a Wardian case. This month our aim should be *rest*.

In the Greenhouse, our operations vary a little from the above. New Holland plants now possess their highest interest. Epacrises are coming into bloom, as are also Eriostemons, some Heaths, Correas, and the like. Such require their amount of water, rather increased than diminished. Camellias, often drop their buds about this period if they get too dry, or frequently from too much water, if the drainage be bad. Where fine specimens are desired they ought not to be allowed to produce many flowers. Growth and flowering are opposite tendencies in plants, by checking one, we increase the other.

In the Flower Garden, whatever desirable half hardy plants were there, are by this time taken up. If the beds require manure, it should be laid on at the first opportunity, and after the leaves are all cleared up for the season, the ground should be dug up rough, as a greater surface is thus exposed to the action of the frost. In many first rate English gardens hardy evergreens are kept in pots, and when the half hardy plants are destroyed in the beds, they are plunged in their places giving the flower garden a cheerful appearance even in winter. In the fine keeping of our lawns we are rather behind the age. In preparing the ground, it should be deep dug, and the kinds of grasses selected for the purpose. If the ground intended for a lawn could be cropped a season previous, so as to give the weeds a good clearing out, it would be an ultimate advantage. As the grass seed comes up, all weeds should be carefully kept out of it, and after rains the ground should be rolled. As soon as the scythe can be used to advantage mow, and *sweep* the litter off. Use a rake on a new made lawn as little as possible. On old ones, a birch broom does the work better than a rake, besides carrying off dirt and stones which a rake would leave.

In the Vegetable Garden, there will be abundant interest in taking measures for the improvement of the soil. Those of a stiff texture will be benefitted by draining, turning up to the action of the frost, or by mixing with it soil of a sandy nature. Soils which have become exhausted will be renovated by trenching, and those which are poor by liberal applications of manure. Soils which are found too light may be improved by a slight dressing of salt, or by mixing charcoal dust with it. Salt is recommended by most writers now-a-days as the best manure for asparagus. If the plants are where they ought

to be, in light shady ground, the advice is excellent. On stiff soils, it makes bad worse. As soon as the asparagus stems are ripe and cut off, give the bed a good covering of stable manure, and let it lie all winter. The same may be said of rhubarb and all similar vegetables. Rhubarb can be had very nice at Christmas by taking up carefully a few roots, potting them,or in boxes, and placing them in a warm, dark cellar. Mushrooms, also may be had very easily by placing half dry manure, that had not undergone much fermentation before it became half rotten, in boxes, rammed in tight, and spawn placed on the top, with about an inch of dry soil on the top of the whole—and the box placed anywhere, where a temperature of 65° can be maintained. Endive when blanched can be kept in use all winter by being kept in a cool, dry place, free from frost, and darkened. The plants must be taken up with as much earth as will adhere, and closely packed side by side. If there is a spare frame, nothing would be more desirable than to plant it closely with LETTUCE. They will come in use very early. CARROTS, PARSNIPS, SALSAFY, &c., should be taken up before frost sets in, and packed away in layers of sand, in order to avoid fermentation. Celery is best preserved by being taken up, placed in rows thickly together, covered with soil, loose straw thrown over it, the whole, kept dry by boards or old shutters.

T. J.

The Florist and Horticultural Journal.

Philadelphia, November, 1852.

The knell of the departed season has been sounded, and nature once more prepared to enter into the annual state of quietude and repose designed to recruit the exhausted system of active vegetable life, and to vary the aspect and character of this creation, so nicely arranged for human gratification and enjoyment:—the season of flowers has passed away, and it would be vain and unreasonable in us to attempt to recal or prolong it, as in the immutable course of natural laws it shall return when the devastation caused by the purifying frost and nutritious snow shall have prepared us for a fresh appreciation of the gifts of spring. Yet Art, in its stubborn attempts to modify, has almost defied Nature. The winter gardens of older nations do not quite yield to the requirements of the season—do not relinquish altogether the summer verdure, but preserve for the gratification of a few, the pleasant accompaniments to the social enjoyments of the winter season—verdure and flowers. The winter gardens of America are scattered, not concentrated into one place. We have as yet no *Jardin d'Hiver*, as there is at Paris, nor Crystal Palace as at Sydenham; nor can we, by accumulated capital in our free Republic, realise what the law of primogeniture easily effects in monarchical countries. Yet we are not quite destitute of the benefits of the winter garden, and we are

happy in the absence of this unnatural law. The impulse afforded by salutary laws to the enterprise of the citizen, affords us abundance of flowers to deck the rich halls where beauty and dignity assemble for relaxation. The rigor of the season admonishes us to close out the chill air of winter, and live as if it were summer, surrounded with the foliage and flowers of other climes, and an artificial atmosphere rendered quite convenient by human skill and invention. We cannot traverse the city and its districts without being struck with ranges of glass of immense extent, under which are deposited the vegetable productions of climates of a different character from our own—where science and skill are concentrated, and a portion of the surplus capital of the merchant is turned into quite a different channel, producing nothing but the means of natural and pure gratification and enjoyment; for after all, the bouquet which this evening adorns the drawing room centre table, is to-morrow, or the day following, but decayed vegetable matter, making but a very trifling return for the outlay, actually absorbing the means spent in its production—returning nothing but a little of that pure pleasure so free from alloy, which is after all but too rare in the social system of the present day.

The many mercantile winter gardens, where anxious skill and incessant labor nurse the tender plants of tropical climates, have not left the American public destitute of the graceful accompaniment to the evening party, soireé, concert, and ball—a choice bouquet of natural flowers. We are well aware that there are many persons of high attainments who can appreciate the divine and beautiful in other departments of nature, and yet do not admire, do not care to behold these frail offerings, produced at a waste of time and means. We grieve that there are any such; but time will change this want of attention to the smaller creations of their revered and provident Father. Winter then comes apace, and cuts down as he approaches our favorites in the garden. We appeal to art to afford a protection against his destructive hand; but he destroys only to renew. We fly to the conservatory—*Hic ver æternum*. Here art almost defies nature—or at least assists it. To the cultivation of that art we have devoted these pages, and those who already appreciate the glorious influences of Horticulture, must not content themselves to see and admire, they must read and study, so as to make the science so general that even the mass of our people shall acknowledge its softening influences on their lives and actions. 'Tis true, there is here no profitable investment for capital accumulated by excessive labor and devotion to mercantile pursuits; but the Deity is here in the flowers—he can be seen and admired in his creatures—a most important feature not witnessed in the steady accumulation of wealth. We of course advocate our own interests in these remarks; we admit it, but in doing so we hope

we effect more; it is hoped an influence is encouraged which tends much to benefit society.

Spring shall return again. The seasons change, but their course never changes. The leaves fall by the breath of Autumn, and why? Who can define, who has explained satisfactorily, with all the scientific research accumulated into books and journals to the present day? Who has satisfactorily explained this simple natural phenomenon?—Who has traced the causes of the germination of the seed after remaining for centuries quiescent? Who has yet shown the nature of the force which impels the sap through the multitude of vessels in the ligneous structure? We must not despair because we, created beings ourselves, cannot read the mysteries of creation in detail. Progressive creatures, it is our duty still to progress, though we may never reach perfection. The humble gardener goes through the various operations of the season; we wish to make him reflect as he proceeds that he acts upon living organizations, susceptible like ourselves of good and bad treatment. Towards the improvement of the science and the operator, all our suggestions and researches tend; and we here solicit the aid of all interested individuals.

Arboriculture—Indigenous Trees.

The claims of the Indigenous trees of America have from time to time been pressed upon the attention of those engaged in planting. The reason and taste has been appealed to, and the subject is renewed at intervals. It may not therefore, be considered injudicious in us to offer a few remarks on the subject, which is of some importance as regards the future character of the decorative portion of American Arboriculture. We rejoice to see the claims of any neglected portion of nature's offspring presented and enforced, but not in antagonism to some other equally worthy section of the family.

Let us enquire why Indigenous trees are not more cared for; may it not appear that the people who plant trees have not been made acquainted with the beauties and advantages of the indigenous productions which flourish in every wood and forest, imparting to the country an air of grandeur and freshness, which elevates the moral feelings, and makes Americans feel proud of their country. Her majestic children of the forest, stately in appearance, and profusely scattered over the length and breadth of the country, are bulwarks of prosperity; even in their fall they form objects of interest and value, ministering to household and national wants. The timber of any country is an important item in its political economy. If American trees are not cultivated for their ornamental beauty, American shipping constructed of them is valued and admired all over the world.

But, why are not American trees more in demand for planting? simply because they have not had attached to them, according to the principles of political economy a value sufficient to make them desirable. Their beauty is acknowleged when pointed out—"Look at that stately Tulip tree" says one, "with its splendid flowers." Splendid! superb! answers his friend, "Where can I procure a number of them to ornament my lawn." "At the nurseries," is the reply. The nursery is sought out and the cost ascertained; and the proprietor perhaps questioned as to where they were obtained. If in the woods his customer replies that he too can procure them there. And the dealer thus disconcerted, either does not care to keep a supply on hand, or if he do, must not sell them as American plants at all, but call them *Liriodendron tulipifera*, and import them from France, where they have been cultivated from seeds obtained from North America. But this is the same North America which we live in, and the Liriodendron is our familiar friend the Tulip tree. We once travelled a good distance in England to obtain specimens, and these were obtained with no little difficulty from a splendid specimen growing in an extensive park, and so valued that our depredations on the flowers would have been treated if discovered, as peculiarly officious. Now we see it everywhere, and we admire it none the less. The Catalpa is another specimen which we once held as rare and desirable, but such miserable specimens of it as we have seen in the English nurseries. Why they gave us no conception of the plant whatever. Now we view it as a rich and luxuriant tree with tropical aspect, and quite refreshing to the eye. If it could be transformed into a hothouse plant by acclimatisation in an opposite direction to that, towards which these experiments generally tend, it might yet become popular and valuable in America.

And our *Gymnocladus* is no mean specimen of the richness of spontaneous American Arboretums. We think few can help admiring the Kentucky Coffee tree, with its pompous botanical title *Gynocladus canadensis*, pared down to the simple Kentucky coffee tree. And then for an ornamental shrub, what is more graceful than Chionanthus Virginica or fringe tree; even the Dog Tree in its snowy beauty, is by no means a mean accompaniment to our rural landscape; true, it is without the fragrance of the Hawthorn, so valued by "our excessively travelled friends," and without the freshness which its foliage imparts to the Cratœgus contrasting with its flowers, but the Cornus Canadensis is a splendid plant. The sweet Chestnut, *Castanea Vesca* is not to be overlooked as an acquisition to a lawn, peculiar in its outline, but striking in its habit; with its deep green and long continuing foliage no more beautiful object can be found for certain purposes—'tis true the Horse Chestnut produces abundant pyramids

of beautiful flowers, and besides, every one cannot get it; it must be purchased and that not at the cheapest rate. But then we have the Pavias, the Ohio Buck Eye—why it is little inferior to the Œsculus and very similar in habit, indeed it was once included in the same family, but the officious botanist drew a separating line, and these botanists are not to be opposed in their nice arrangements by the, uninitiated, they have it all to themselves and they do well to make the most of it. Our Evergreen Cedars, or Red Cedar as it is called, must certainly command the respect of Americans. Look at those splendid trees in Mantua, Hamilton Village, and all around, and who will not exclaim, America is rich in evergreens.

But they cannot cheat us out of our ornamental shrubs, the Magnolias, Azaleas Kalmias and Althæa. They may for a time exclude from the favored boundaries of the country seat the more common trees, as they are termed, (no product of nature is common) yet the majority are forced to acknowledge the rich and abundant bloom afforded by the Magnolia; how striking is its pure white flowers, so profuse in the early spring, charming to the eye even of the merchant absorbed as he is, hurrying towards his counting house. The Calycanthus or Shrub is a universal favorite. Let but the claims of American Trees be fairly represented—let them be seen in a Public Park or Botanic Garden, so arranged and accompanied by other attractions, such as neatly kept flower borders—collections of American Herbaceous Plants, Hardy Shrubs and well kept Lawns—place in such company, and with such accompaniments, the stately trees which are the spontaneous production of our country, let their technical and familiar names be legibly displayed, and we do not fear but they would be valued by the people of good taste in America.

While the advocates of more attention being given to indigenous trees would claim for certain favorites a trial, they would not it is hoped become exclusive; if so, they would exhibit bad taste, and narrow and contracted ideas of the beautiful in nature. No European would dream of banishing the Araucaria from the park, but all who possess specimens, pamper and encourage them; and so it is with the *Cryptomeria Japonica*, and hundreds of others, and North American trees are not the least numerous in the Arboretums of British Botanic Gardens. The Shrubs of America are more valued there than here. Kalmias, Gaultherias, Azaleas, without number cultivated with much expense, are never looked upon as intruders—and such is also the case with the different Maple trees so abundant in America—they are there planted and cared for, and their native country if known, is only looked upon as a stronger argument in their favor. While therefore we hope to see American trees more valued in the parks of this country, we have no idea that the hardy and ornamental trees of other countries will be undervalued or ex-

cluded. The union of all the objects in nature tends to heighten our reverence for the whole system; and while we admit that our herbaceous flora is much too little cared for, we believe there is no fear of neglect with respect to Arborescent Natives—they stand up in defence of their claims, and cannot be *overlooked.* In order however to bring the matter fairly before the public, there must be something more than writing; the comparative value of the several applicants for favor must be clearly shown, and to this end we would say to the enterprising citizens of this flourishing portion of the Union, give us a Botanic Garden—set apart a few acres of the abundant territory of America and dedicate it, free from the encroachments of speculation, to the service of the beautiful in nature. Give the peaceable inhabitant of the city who wishes to indulge in a little intellectual recreation, a park to walk in, where he can read nature out of her own book. 'Tis true we have squares, but we get fatigued in them. Every tree, nay every spot of ground in Franklin and Washington Squares, and even Logan and Rittenhouse, has been marked and traversed time after time. The squirrels which sport amongst the branches of their trees are quite domesticated by our frequent visits, and we can see no flowers here. The trees are growing so tall that we only become familiar with their trunks and we can scarcely satisfy ourselves whether or not that tall specimen is *Fraxinus acuminata*, for its leaves if they are acuminated, are out of our reach. Give us even a small Botanic Garden for a beginning. Let it be at Bush Hill, Green Hill, Laurel Hill, or Lemon Hill; the last mentioned place is not the least appropriate, in fact it is the very locality for such an acquisition to the beauty of the city. With Fairmount, Girard College, and Laurel Hill all in its vicinity, how different would the Falls of Schuylkill appear viewed from the terrace surrounding a grand conservatory on a fete day, situated on the sloping ground of Lemon Hill, with a band of music to charm the invigorated spectators. We do not fear but that the refined taste of the citizens will yet have an impulse imparted to it, in such a direction. Then, our correspondent "*Philarvensis*," will be gratified by seeing *Podophyllum peltatum* labelled and growing where it may be recognized and admired as a real native; and Gymnocladus and the Pavias alongside Paulownia, Laburnum, and the Œsculus.

Our Monthly Tour of Inspection.

When we commenced the publication of a horticultural journal we did not intend to confine our operations to the business of receiving communications, arranging and replying to them. We proposed to ourselves to note the actual progress of horticulture by visiting those establishments where the science is promoted and encouraged, thereby

becoming conversant with the position of horticulture in America, and not depending on the communications of correspondents alone for our information. With this view many gardens and country seats were visited, and most of the nurseries and public gardens in the vicinity of Philadelphia and New York. Many of these did not appear to us worthy of especial notice; and with regard to the nurseries, we do not believe it to be our office to speak, either in praise or disparagement. We would have been much disposed to lay before our readers the details of our visits to many of them, and to recount the plant novelties that we observed, but to do so would perhaps be to lay ourselves open to the charge of promoting the private interests of certain dealers, so far as that could be done in such a journal as the "Florist," by recording our opinion of the merits of certain plants found only in certain establishments. We shall, we hope, preserve the journal from such insinuations. We discontinued our notes for the last three months. The Pennsylvania Horticultural Society, as most of our readers are aware, appointed a committee of inspection of gardens, after the motion having been carefully discussed at two stated meetings; we declined serving on that committee, as we were doubtful of the result of its appointment; but we did not wish our notes to clash with its proceedings. The committee's report was made returnable at the stated meeting in November, and as that time is not far distant we presume its labors are completed—we shall therefore now resume our notes.

We visited the country seat of C. H. Fisher, Esq., in the neighborhood of this city, one of the most extensive of the rural residences of the merchants of Philadelphia. The situation and surrounding scenery are of themselves well calculated to attract the attention and admiration of the visitor. No matter from what point the *chateau* is approached the richness of the landscape is apparent, while the commanding aspect of the mansion itself renders it a conspicuous object. Surrounded by woody valleys on all sides, the family residence is quite removed from the public thoroughfare, and situated as it is on the breast of a hill a view is afforded miles in extent. Nor is this establishment entirely isolated, several fine residences are scattered around in its vicinity—that of the Hon. J. K. Kane is situated on a neighboring eminence, vieing with it in the grandeur of its forest trees and well chosen site. In the valley on either side is also to be found a neat mansion with its garden and conservatory, the latter appearing conspicuous by its glass sashes through the trees so profusely scattered around. Although quite a newly arranged place, that of Mr. Fisher rapidly progresses towards perfection. Besides the care and taste displayed in the decoration of the lawns and shrubberies, the gardener, Wm. Hammill, does not neglect the greenhouse and vinery. The

latter is a very neat structure, with double curved roof similar to that of J. C. Green, Esq., Staten Island, where Mr. Chorlton is gardener. This vinery has been planted with choice vines, which are yet young and have not yet borne a crop; but from the achievements of Mr. Hammill in other branches of his business, we have no doubt but he will produce a respectable return from these vines. A neat and compact forcing pit has just been constructed, as well as a fine pit for cauliflowers in the same range. When time is afforded, we hope to rank this place as one of the first in the United States in exotic horticulture; but such results are not attained by reasonable expenditure, it must be carried on with spirit and determination.

Pennsylvania Horticultural Society.

The 10th Stated Meeting of the year was held on the 19th inst., in the Lecture Room of the Chinese Museum, the Hall being occupied by the Exhibition of the Franklin Institute. As neither the President nor any of the Vice Presidents were present, Dr. Brincklé, who is seldom absent, being in attendance at the State Fair of the Pennsylvania Agricultural Society, Lancaster, Caleb Cope, Esq., late President, was called upon to preside. The display would have been extensive, but that the schedule was limited to a few objects. Several persons brought specimens of Esculents but did not deposite them. A. Felton, Jr., however, persisted in doing so, and we do not believe they were in the way, and they certainly improved the appearance of the platform, as they were quite respectable specimens.

Thomas Meehan deposited several well-grown specimens of the Lilliputian or Pompone Chrysanthemums in profuse bloom, which proved how great and desirable an acquisition these are to the Fall flowers, as we were rather short, at this season, until these came into cultivation. The large sorts were not sufficiently compact in habit, or in the character of their flowers; these sorts are attainable now in this country, for on referring to our advertising sheet, numerous collections will be found advertised by several dealers. A fine plant newly introduced was also exhibited from the same collection, called *Crowea latifolia*—its shining green foliage and delicately rose-colored flowers, impart to it a pleasing appearance. The specimen was well bloomed—it is a greenhouse plant, with the appearance of an *Eriostemon*; an older species *C. saligna*, is more familiar to our readers, it is the next family to Eriostemon in the Natural Order to which they belong—Rutaceæ or Rue tribe. The pretty Texan or Mexican plant, *Microsperma* (*Eucnida*) *bartonioides* was exhibited by R. Kilvington—is will be found described at page 196 of the present number—we hope it will not share the same fate as the favorite Dodecatheon, of which our calendar writer relates an anecdote at page 149; yet this too, is not less a weed than the other—so is the Victoria when found growing in the River Amazon in abundance. Microsperma however is a pretty weed and one which we hope will become familiar in the annual border. A Bouquet for the Centre Table was exhibited by Thomas Meehan, also a basket of Cut Flowers—in it we observed a beautiful spike of *Hedychium macranthum* along with other novelties, the centre bouquet was

adorned with the leaves of the curious Aristolochia or Birthwort, a species allied to the Dutchmans pipe, (Aristolochia Sipho.) This individual was said to be *A. Brasiliensis*, and it flowered at F. Lennigs this season in the open air, but supposed to be *A. hyperborea.* Its dusky colored bird-shaped flowers are more curious than beautiful; it is like a freak of nature in the Vegetable Kingdom. The basket of Indigenous flowers contained specimens of our Autumnal Flora—such as *Gentiana saponaria*, with large blue flowers; the curious *Epiphegus* or Beech drops, found growing by the trunks of beech trees, a plant without perfect leaves, being furnished with a few scales along the stem, and one which might be considered by some without much beauty; also specimens of the *Spiranthes*, (Neottia) or Lady's tresses, a little terrestrial Orchid, found in abundance in several pastures in the vicinity of the city. It is hoped the Native Botanists will pluck up courage to compete a little more than they do. Pears, Apples, Plums and Grapes were exhibited. A premium was awarded to C. Cope's gardener, for 12 specimens of the Duchess D' Angouleme Pear; specimens of Passe colmar, Napoleon and Excellentissima were also exhibited by the same, as well as Reine Claude Bavay Plum. grown under glass. Mrs. Smith's gardener exhibited a variety of Pears, and a special premium of $1 was awarded him for specimens of the Beurre d' Aremberg. T. P. James, Rec'd Secretary, exhibited Pears and Plums, and a 2d prize was awarded him for specimens of the Mouille Bouche Pear. To N. W. Roe, Woodbury, the first was awarded for 12 specimens of the Golden Pippin Apple. A special premium was awarded to H. W. S. Cleveland for Black Hamburg and Muscat Grapes. Benjamin Gulliss exhibited fine Quinces. Pears were exhibited by Mr. Kryder—Apples by Mr. Snyder—Butter Pears by A. Parker—by S. Dick, Isabella Grapes—by B. V. French, Mass., Diana Grapes, flavor somewhat foxy—by J. Watt, Rochester, St. Lawrence Apples, to which the 2d premium was awarded—and Tomatoes by J. Anspach.

A portion of the minutes having been read, new members were elected and others nominated.

Caleb Cope from the chair stated, that having lately presented some fruit to a friend and relative, he took occasion therewith to enforce the claims of the Pennsylvania Horticultural Society, and in reply he received a check for $50 dollars, which he begged leave to hand over to the Society. He could not help remarking, that as far as he could ascertain by a careful review of the minutes, that this was the first money donation that had been made to the Society since its foundation. The donations received amounted to a few re-relinquished premiums and some books for the library. 'Tis true this donation was trifling in amount, but it was at least a beginning, and he hoped the example would be imitated. He was surprised, and it was a reproach to the wealthy community in which the society was situated, that while the wealthy persons of the neighborhood enjoyed its privileges, and were benefitted by its labors, no acknowledgment was made by them of its usefulness—they attended its meetings while alive, but left nothing behind them for its support and extension.—That while other similar societies were encouraged by donations of money and legacies, that of Massachussetts for instance, having received rising $20,000 besides a promise by will of a space of ground of which to form an experimental Garden, this society should be neglected and suffered to struggle on from year to year.

He hoped that this was a beginning of a better state of things, and that it would be imitated by others—he hoped the fact that this was the first actual donation of money to the society, would be noticed in the proceedings and minutes, both public and private.

The donation was handed over to the Treasurer, and a vote of thanks unanimously awarded to the donor, Thomas P. Cope, Esq. The thanks of the Society are also due to the unceasing vigilance of the Chairman for his attention to all opportunities where the interests of the Pennsylvania Horticultural Society can be served, of which he carefully avails himself—to his exertions the success and existance in fact of the Society is mainly owing.

On motion the Meeting adjourned to the 16th November.

Lancaster State Fair.

We visited the State Fair at Lancaster where so many farmers and others were congregated, some to display their productions and some to examine them. We hoped to see an extensive exhibition of Horticultural productions, as the German population are proverbial for cottage gardening, and this is their head quarters; we were disappointed; but for the display of evergreens from P. Morris & Co., West Chester, the Floral Hall would have looked rather empty. Some fine fruits were deposited; and H. A. Dreer, of Philadelphia, exhibited a stand of Roses, and a collection of Cranberry plants and fruit, which attracted much attention. A large specimen of the Screw Pine was observed from Mr. Vondersmith, also a plant of the *Musa*, or Banana. There were some fine specimens of Esculents deposited but not an extensive assortment.

Some beautiful fabrics of bed quilts were displayed and a variety of manufactured articles. Peter A. Browne, Esq., had a small tent filled with specimens of wool—for observations in this department Mr. Browne is celebrated. The exhibition of horses and black Cattle was extensive. Hogs and sheep were also numerous. The decision of the Judges at the Philadelphia County Exhibition was here reversed in the matter of the Bull, Rockland, the property of James Gowan, Esq., Mt. Airy, and that of Chas. Kelly, Esq., of Delaware county. Mr. Kelly's animal obtained the first premium at the Philadelphia Co. Exhibition on the 31st of October, and Mr. Gowen's, the first at Lancaster, on the 20th of October. We recommend this fact to the notice of those curious in such matters.—We would suggest to the Committee of Arrangement, that Reporters should be admitted free of charge, as is always the case at similar exhibitions—this privilege was refused us however, in this case.

We have only space to publish the list of premiums, as far as Philadelphia contributors are concerned:—

Awards—*Cattle* 2 years and upwards, Gen. G. Cadwalader $15 for best herd of Cattle.

Durhams—James Gowen, Mt. Airy for his Bull, Rockland, 1st premium $15. Charles Kelley, Kelleyville, Delaware Co., for his Bull, 2d premium $10. Samuel Cooper, $7 for 2d best Cow.

Alderneys—H. Twaddel $12 for best Bull, no competition—$8 for 2d best, $10 for best Cow, $7 for 2d best, $8 for Heifer.

Durhams under two years old—James Gowen for short horned Bull, Leopard $8. R. Cartwright for 2d best $5. James Gowen for Durham Heifer, Dairy Maid, $6. Gen. Cadwalader for Heifer

Calf, Blossom, 1st premium $6—do for Bull Calf, Bravo, 4 months $3—do Heifer Calf, Thyra, 4 months $2. Alderney Heifer, 2 years, 1st premium to H. Twaddell $6.—do do 1 year $4—do do 4 months $4. Alderney Bull under two years, 1st premium to A. Clement $8. Ayrshire Heifer Calf, Red Lady, under one year to Gen. Cadwalader $4. The Judges notice from Gen. Cadwalader, 30 head of Cattle. James Gowen for pair of full bred Devon Oxen, 2d premium.

Sheep—A. Clement, 2d best Buck $4. Gen. Cadwalader, best Ewe $6. A. Clement, 2d best S. Down Buck $4. Gen, Cadwalader, 2d best lot $4.

Swine—J. Wilkinson, for best Boar over two years $6—do do under 1 year $4—do best Sow over two years for "Old Pink" $6—do best Sow over 6 months, and under 1 year $6.

Horses—J. Clark, best Stallion for saddle $15.

Poultry—R. Cartwright, $2 best Cage. R. Fraley, $1, 2d best pair Dorking fowls. J. McGowen $2, 2d best pure Shanghais.—R. Purvis $1, 2d best—do best pair Cochin China. James Gillespie $1, 2d best do, also a special premium of $8. A. Clements, special premium $5. Wm. Leonard for Shanghais $2. R. Fraley for 2d best for Wh. Shanghais $6. Dr. McClintock $1 2d best do. R. Purvis $2 for Cochin China. Wm. Leonard $2 for Sebright bantams. do $2 for Japan Fowls. R. Fraley $2 for pair Grey Chittagongs.

Fruit—J. B. Baxter $2 for Grapes.

Agl. Implements—Savery & Co. $8 for left hand Cutter Double H. Plough, No. 40. Prouty & Barrett for Rod and Cutter 2 H. No. 55, 5, 2d premium—do 1st premium for 1 Horse Plow 5—do for double Michigan Pl. 1st premium 5. Savery & Co., for Side Hill, Pl. No. 3, 2. Prouty & Barrett, for extra Cultivator, 1st premium 4. C. B. Rogers deposited several fine Ploughs and other farm Implements, which being entered late, only a 2d premium could be awarded of 3.—Prouty & Barrett for best Ox Yoke 2—do for Corn Sheller 4, and for another sort 5. Savery & Co. for Vegetable Cutter, a Diploma. Jas. Aldrick for Hay, Straw and Corn Cutter, a Diploma. Savery & Co. for Thermometer Churn 4. Prouty & Barrett were awarded a Diploma—do for largest lot of Implements 20. Savery & Co., for next largest lot 10. N. Longworth, Cincinnati, for Domestic Wine 3.

Ploughing Match—Prouty & Barrett 1st premium for No. 55 Plough.

Mechanic Arts—R. Jackson, 2 for Zeyphr Work. Savery & Co., a Diploma for Enamelled Ware. Boulden & Price, 5 for Composite and other Candles. Lacy & Philips, for a sett of Harness 6. G. W. Wagner, 5 for Buggy Waggon. Peter A. Brown's collection of Wool was noticed with satisfaction by the Committee.

We have endeavoured to give a correct list of the successful competitors from Philadelphia county, and we are sorry our space does not permit us to give a complete list. Journals in other states can do as much for theirs, and then all will be pleased.

TO CORRESPONDENTS.

The Report of the Maryland Horticultural Society, has we are sorry to say, been excluded. It will be published next month.

We hope our subscribers see the advantage of pre-paying the Postage at their respective offices, as it is a mere trifle.

Errata.—At page 199 for *partial*, read practical, and for *quality*, read quantity.

THE

PHILADELPHIA FLORIST

AND

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A MAGAZINE OF

Horticulture, Botany, Agriculture, and the Kindred Sciences.

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Progress of American Horticulture---Glazing.

There is a great difference between the objects aimed at in Agriculture and Horticulture. The former seeks to raise the largest quantity of produce at the smallest possible cost—the latter aims at gratification and pleasure, aside from the cost. The boast of the agriculturist is, that he raised so many bushels per acre, whilst the cost amounted to only so much. The pride of the horticulturist is, that he possesses the rarest flowers, the choicest fruits, the most superb vegetables; that his grounds are unique, his arrangements pleasing, his trees magnificent, his whole garden a source of unparalelled pleasure. Yet the cost has *something* to do with horticulture—a given sum will only purchase a certain amount of pleasure, and the cheaper we can make horticulture, the greater and more extensive can the gardening operations become. This is a grave question for gardeners. They are interested in every thing that tends to lessen the cost of gardening operations to their employers. We all often inquire whether gardening ever will be carried on to the extent in this country that it is in England; and when we look at the vast fortunes of the English nobility, the hereditary pride in their gardens handed down by their ancestors, bound fast by the ties of the law of primogeniture, we deem it impossible that the accumulations of one man's life can ever give American gardening so high a pedestal in the temple of fame. Yet there is one avenue left open for us, one course by which we may possibly contrast favorably with them—in producing the same results we can aim at reducing the cost. We are far behind in machinery connected with our profession. Agriculture should make us blush. The strong competition in it has brought machinery to a point seemingly approaching perfection. What has Horticulture done—leaving out the hydraulic

ram, hot water apparatus and tank system?—Very little. We must awaken; we have slept too long—the sun of agriculture has long been risen; we must haste to make up with it. If our employers have $3000 a-year to spend in gardening, and we can invent machinery or suggest ideas by which we can get as much done, and as well, for $2,000, we have $1,000 saved to increase the beauty of the establishment, employ an extra hand, and add to the glory and honour of American gardening. Thus, and thus only can we expect to compete with British Horticulturists—America is pre-eminently the country for ideas and machinery. Let Horticulture not be forgotten in its application.

Following out these ideas we would call attention to the use of putty in glazing. It is a source of continual annoyance, *drip*, and expense, while it can be entirely dispensed with. Every one accustomed to hot houses especially, is aware of the constant re-puttying they require.—It can be dispensed with in the following manner: Let the glass be cut to fit the sash, but not too tightly, or it will break by the expansion of the wood; then the rabets being first painted with rather thick paint, lay in the glass as in common glazing, then *paint* them in; when dry give it another coat, if you like. We have recently seen some glazing on this system, and it "can't be beat." The "putty never peels off," of course the glass is as firm as possible, and there is not the least beginning of a leak. Where the sashes are very steep, the squares might be tacked in by small triangular tacks, such as is used for tacking in squares in greenhouse doors; but from the firmness of the specimens we recently examined, we believe this will be found to be unnecessary. Not only is this system, (which we shall call the American system,) cheaper *in the end*, than the putty system, but also in the *first cost*. If the present mode be properly performed, the rabets should be painted before the placing in of the glass, and after they have been puttied, they are again painted. The "American" system asks no more. *

AGRICULTURAL EDUCATION.

In a country like this, where Agriculture is the occupation of so large a proportion of the inhabitants—where so much of the produce is exported for the sustenance of the people of other countries more densely populated—where the soil is still, comparatively speaking, unexhausted, or still remaining undisturbed by the plough; and the resources for the extension of remunerative agriculture inexhaustible—it must be a matter of surprise to many that as yet nothing has been done towards establishing a system of Agricultural education. No National or State machinery yet set in motion to accomplish so desirable an object as the education on sound principles of the rising generation of

cultivators upon whose exertions depends the supply of food for millions of the human family, not only within the bounds of our own territory, but even in foreign countries. Satisfied no doubt with the progress already made in the art, the necessity for educating the farmer is questioned; it is a matter of doubt with some, whether special provision should be made for his instruction in the principles on which the success of his operations depend. Will not the soil yield its produce without any scientific knowledge being applied by the operator? It has done so heretofore—why will it not continue so to do? Such a deduction is by no means clear or correct. Were the natural laws, which must be observed before success can attend the exertions of the farmer, so clear and apparent that even the most superficially educated peasant might read and understand without effort or study, then it might be considered as a matter of indifference whether or not any means were provided for putting the information required within the reach of those concerned. On the contrary, when it is a well known fact that the principles on which successful cultivation is based are by no means perspicuous or obvious, then those whose duty it is to watch over the vital though less clamorous interests of the commonwealth, should take care that the means of obtaining a knowledge of the more important and fundamental laws of matter in relation to the tillage of the soil, be placed within the reach of every citizen desirous to obtain it, from youth to age.

Few citizens of this Republic can be found unable to read and write. Trained under its efficient school system the majority of them have had the benefit of a useful elementary course of education; most, if not all of our farmers can read; but how few have by reading been made acquainted with the component parts of soils, with the composition and decomposition of the bodies used by them in their daily operations—with the different agents, active and passive, brought into combination to produce what appears a simple result, the absence of any one of which would affect materially the success of the operation. Yet such acquaintance with a few principles as would render these farm operations intelligible and reasonable to themselves and satisfactory to others, might be easily imparted, and would, we are certain, improve the social and moral position of this most important section of our fellow laborers. It may be argued that farmers are opposed to any attempt to spread information amongst them, affecting their ancient methods of tillage; that they are more disposed to follow out erroneous systems because well established, than to adopt novel methods recommended to them by experimentalists, that the advices offered them by means of agricultural journals is rejected and sneered at. We cannot blame the farmer when he refuses to follow out a new practise which he cannot clearly comprehend; isolated statements

cannot satisfy him that he will be as successful with a plan the reason of which he does not clearly understand. The groundwork on which it is based has not been fairly represented, and his mind is not satisfied on the matter. In the question of thorough draining, for example, the benefits of which are extolled by many agricultural writers, but the scientific principles on which these depend are not set forth so as to afford convincing evidence; and the farmer who deplores the parched state of his land during the summer season, cannot understand why draining away the surplus water could benefit it. Yet such is the fact; thorough draining, by rendering the soil pervious to air and the periodical rains, preserves the texture of the soil and prevents that incrustation consequent on the rapid evaporation by the sun's rays, which is so common on land which is wet below. Agricultural journals can never afford that knowledge of first principles which is so necessary; the information generally contained in them is of a casual nature, easily lost sight of, even if attended to. What we want is a well digested system of rural tactics, placed in the hands of those designed to live by the plough—a system based upon strictly scientific principles, adapted to practice and to the peculiarities of each section of this vast agricultural field, and to each class of agriculturists in that field; that system to be illustrated by actual practice in model farms, in several localities in each State of the Union. With such an organization nothing need be feared respecting the capabilities of American agriculture; the soil is ready for the intelligent operator, but intelligence is requisite to preserve its proper condition.

We hope to see a system of Agricultural training set on foot, which after teaching the young farmer the composition of soils, will take him into the field and show him the existence and characteristic of each component part; which while it explains the changes and modifications of the geological structure of the earth, will point out in nature the results of these changes. While it teaches him the composition and action of the different gases affecting vegetation, will make him familiar with their physical characters, not only explaining but proving the changes they undergo and effect in soils, and manures. Then at length the farmer would begin to value his position, which is by no means an unimportant one; and his importance as a citizen would be acknowledged at other times, as well as on "election day," when as B. P. Johnston tritely expressed it, "he was a very important man."

There has been much talk about Agriculture lately in connection with legislation. In fact it is believed that Congress *will* legislate in behalf of the Agricultural interest by a *Bureau* or something else in that way. We are even now waiting for the action of the United States Agricultural Society lately organized; we hope it will

prove an efficient exponent of Agricultural wants. But after all more is to be expected from one efficient Model Farm well conducted in any state, than such general organizations. The establishment of such has been urged and recommended time after time by our statesmen who have witnessed their salutary effects in other countries. We believe after all the move must be made either by some state or county society and we hope that of Pennsylvania or Philadelphia county will set the example.

We shall not now detail the plan which might be proposed for the establishment of model farms or agricultural training schools. Such an establishment has been in operation for some time in this county, but being a private establishment it cannot be said to meet the demands of the state, although no doubt a very useful institution. We hope, however, to see the benefits which it was intended to afford increased in the coming year, and it will then serve to point to what might be realised by a more extensive organization.

Retrospective Criticism.

Foreign Horticultural Establishments.—The botanic gardens of G. Britain, whether royal, belonging to societies, or supported by subscription of townsmen, are what we hope to see in many places in this country. We have so extensive a flora, and American plants are so much desired in Europe, that very profitable exchanges could be made with any of those foreign establishments. It seems to us that the longer the purchase of ground for this purpose is put off, the more difficult will be its acquisition, as the bricks will soon cover all the ground between the rivers here, and prices are rapidly advancing in all the suburbs. With respect to gardeners who have "been at Kew," in the earlier years of our horticultural experience we often doubted whether there were more than two places in the United Kingdom, as all the gardeners we saw had either come from Kew, or the Duke of Buccleugh's.

Grape Culture.—The culture of foreign grapes under glass is a matter very interesting to the amateur and the market grower. To one, for the importance of having so fair a dessert fruit always attainable—to the other, on account of the very good prices realisable for his productions. A good system of growing them is followed by many of our gardeners, and those who wish to follow in their footsteps have only to read and practise. Subscribing to the "Florist" will furnish the first requirement, which is also the most important in our opinion.

European Horticulture.—Your readers are very much indebted to Mr. Buist for his observations. We have a better idea of flower shows and gardens from his *too short* letters than we have gotten from English and Continental papers in several years. His continuance of the

subject will be a favor. One thing in the arrangement of exhibitions: Each competitor arranges his own productions. If that could be accomplished at our annual exhibition, it would give, we think, much more satisfaction. We know it would be difficult, as some collections outshine others so much; still many would like to see it tried.

New introductions.—We have seen a figure of *Capanea grandiflora* which you mention as having seen in a collection; its flower is quite twice the size of a large Gloxinia, and if a free bloomer, will be a great acquisition. If you attempt to correct the spelling of the names which plants generally receive, it will keep you rather busy than otherwise. But it would be gratifying to see more attention paid to the matter. With regard to the gender of the adjective or specific name, most gardeners consider all names of plants feminine, and in nine cases out of ten you will read Clerodendron japonica and Cereus grandiflora.

We hope to see a handsome figure of the Amherstia in the "Florist" one of these days, as well as of the Victoria. Very many persons who live at a distance would be delighted with a good figure of either of these, which otherwise they may never have a proper idea of.

Microsperma bartonioides is a beautiful plant, and we hope to see it on sale next year, so that we may beautify our borders with it.

Window Gardening.—The suggestion of Cyclamens and Oxalis for window culture is the best we have seen; the former, especially, continues long in bloom, and is very attractive.

Hurrah! for the Natives.—We hope you will receive many communications on the same subject. Your friends in the country have an excellent opportunity of noting the pretty plants in bloom, and with a very little trouble they can furnish you with notes of those growing in their localities, which by interchange, will also help the formation of those beds which your correspondent mentions.

Floriculture.—It does not seem to us that much competition takes place here in some florists flowers. Camellias, Roses, and Dahlias receive their share of attention, but very few Pansies are shown, (we think only three sets this year;) Carnations are shown to some extent, but we rarely see either Polyanthus or Auriculas—we recollect but one specimen of the latter shown this season. The influence of flowers in humanizing is like that of any other beautiful pursuit—the intellectual drives out or subdues the animal, rendering men better and happier.

Calendar of Operations.—The pruning of fruit trees cannot be too well attended to; we have seen gardeners go to work like a little boy with a new knife, cutting away in all directions; and we have often

felt sorry that they could not be taught better in the same way, viz: by cutting their fingers. We have always thought figs in this climate perfectly hardy. We have known them attain 12 ft. of height in exposed situations in city gardens.

Indigenous Trees.—It is with these as with our shrubs and herbaceous plants—they are not valued in their own country. There are many fine old places, however, in this neighborhood, where our forest friends have full sway, being either left when the place was cleared, or transplanted near the house many years ago. We were brought up under the shade of an avenue of the Liriodendron tulipifera, mingled with Castanea. The city government could certainly not do a wiser thing than to give the occupancy of Lemon Hill to the Pennsylvania Horticultural Society for a Botanic garden.

Penn'a. Hort. Society.—As the Society has a good reason (the occupation of the large hall by the Franklin Institute) for not admitting plants and vegetables for the October meeting, the rule excluding contributions should be enforced. It would be so in England, as many other rules are which are overlooked here, such as awarding premiums before the exhibition is opened, disqualifying fruit and plants for not being ripe, or in proper quantities. It is gratifying that donations to the Society have commenced; we hope that the rich ladies and gentlemen of this city will follow Mr. Cope's excellent example.

NATIVE ORCHIDS.

We extract from a late number of the Gardener's Chronicle some remarks by the editor, (Dr. Lindley) on a subject which we know to be interesting to many of our readers.

"A discussion has found its way into our columns, concerning the possibility of growing hardy terrestrial Orchids as ornamental plants. Opinion is divided as to this, one side insisting upon their being perfectly cultivable, and well suited for bedding out or forcing; the other maintaining first, that they are not cultivable, in the horticultural sense of the term, or if they are cultivable, they are not worth the trouble they occasion.

In this as in many other disputed matters, both sides are right; but there is more right on one side than the other. Some are certainly not worth cultivating, except in botanical gardens. Others are perhaps not cultivable at all, such as Neottia nidus avis, some kinds of Epipactis and other fibrous rooted species. But to say that the tuberous kinds of Orchis and allied genera, Platanthera, Ophrys, Serapias, and the like are either uncultivable or difficult to cultivate, or unworthy of cultivation, is to evince a singular acquaintance with notorious facts. Orchis mascula, latifolia, maculata, &c, are frequent-

ly cultivated with perfect success for years together; and with good management they become far handsomer than in their wild state.

It is, however, a circumstance to be noted, that they all thrive best if sheltered. Treated as frame or greenhouse plants, they acquire a vigour and brilliancy of color which they are not unusually thought to possess. Although natives of our own country in many cases, and in others inhabiting climates where the winter is rigorous, yet they evidently like warmth by day, and to be guarded from a very low temperature at night. *O. mascula* and *Morio* managed as greenhouse plants, well fed and skilfully put to rest when the time of annual torpor arrives, and *then taken care of*, become objects of such striking beauty as even to be thought new species by persons not critically acquainted with them. It is indeed probable that the magnificent *Orchis foliosa* of Madeira, at one time a most beautiful decoration of greenhouses, but eventually the victim of negligence, is nothing more than a noble form of our own *O. latifolia*, invigorated by a long residence in that temperate island. Possibly the explanation of the circumstance now alluded to is to be found in the natural habits among grass, or in woods, where they are guarded from night's cold by the surrounding herbage or the overhanging foliage.

The cause of failure in the cultivation of these plants is, we believe, attributable to nothing whatever except a neglect of shelter when they are in leaf, and to ill treatment when going to rest, provided always they were originally in good health when brought under domestication, which is nineteen times in twenty not the case. For what does a person do when he sets about growing wild Orchids, except go into the neighboring fields with a trowel when the plants are in flower, take them up with "a good ball," pop them into a basket, where their tender leaves are crushed and ruined for life, and then transfer them with little skill or care, to a flower-pot or a flower border? Under such conditions the consider is, not that they unusually languish and die, but that they ever live.

The following shows the manner of growth of tuberous Orchids, and explains the cause of the failure which so so often attends their introduction into gardens.

When a tuberous Orchis has completed its growth, and is prepared to undergo its annual rest, it consists of a somewhat horny oblong body or tuber, which we will call B, with a minute bud at one end, and probably the remains of an old tuber, A, adhering to it. The tuber B is firm, plump, and filled with grains of starch imbedded in mucilage analogous to gum tragacanth, among which is dispersed a small quantity of a fragrant or strong smelling matter similar to the principle which gives its peculiarity to Vanilla. Thus organized, thus prepared, it remains in the ground during the autumn, hardening

under the influence of the high earth temperature of the hottest months of the year, and no doubt undergoing at the same time, certain other constitutional changes, of whose exact nature nothing is known, but which result in what gardeners call ripeness. Then succeed the wet and cold of winter, which the Orchis tuber is now provided with the means of resisting. Spring follows and earth temperature rises; the new growth commences and leaves unfold. At this time A disappears if it had not rotted off before; it had already been dead matter from the first completion of the growth of B for the food of which it previously served.

With the renewal of growth the following changes take place; B having thrown up a new stem, also produces from its neck certain fibres, c c, which spread around it in the earth in a circle, and more or less horizontally. It also produces a new tuber from one side of its neck, which tuber may be called D. This D gradually organizes itself as B did, sucking out of B the food therein contained, exactly as B sucked its food out of A. It does not appear that after the first B has any influence upon the growth of the plant, food for the leaves being provided by c c, and returned by the leaves to D. All this is going on during the growth of the new tuber D, the vegetation of the leaves, the display of the blossoms, and the ripening of the seed-vessels, if any are produced. In the midst of these important operations the plant collector takes the Orchid and puts it in his garden. The flowering time is preferred because the plant is most easily found at that period. All the horizontal roots, c c, are necessarily cut through or mutilated, for they spread far around the central stem; the leaves are crushed when in full activity, and when all they can do is imperatively demanded by the young tuber D; and from the shock thus communicated to the constitution, the young plant never recovers. D is half-formed, is afterwards starved, and ends in being a shrivelled impotent body, incapable of carrying on its race, or only capable of producing an emaciated offspring.

But if the new plants were not taken up till D was fully ripe, how different would be the result. The fibres c c, would then be dead and useless; the leaves would have completed their important duties, and all the organization of which D is susceptible would have been secured. In that state D would give birth to a new plant with all the constitutional vigour proper to the species. That this is so, is proved by the facility with which imported Orchis roots, collected by experienced and sagacious persons, always grow, and by the vigour of their first offspring.

Those who know terrestrial Orchids only by the species commonly wild in England, form a very inadequate notion of what they really are in the south. Orchis undulatifolia, militaris, fusca, papilionacea,

longibracteata, longicornu, and sambucina, Ophrys tenthredinifera and lutea, with Serapias cordifolia, would form a cluster of a bright colors and beautiful forms, such as it would be difficult to eclipse even among the Epiphytes of the tropics. As to any outcry about the impossibility of growing them, we can only say that it will be chiefly raised by the same class of gardeners as that which maintained the uncultivableness of Epiphytes in any way, and of Roses in pots, and and of plants in general in slate boxes.

THE GLOXINIA.

All the varieties of this interesting genus are easily cultivated. What they require is a moist, warm temperature during their growing season and when in flower; most of them remain long in perfection if guarded from damp. Gloxinias, especially, deserve the attention of those who require a supply of gay and variously colored flowers throughout the year, as with proper accommodation it is easy to have them in blossom during nine months out of the twelve.

Their propagation is exceedingly simple. The pots should be filled half their depth with potsherds or charcoal, the other half with light, sandy peat, covered lightly with silver sand. This arrangement will answer for either of the ordinary modes of increasing this plant. Leaves cut through the main ribs, laid upon the surface of the sand, and kept in contact therewith by means of a few small pebbles, will form small tubers in the course of a month or six weeks, if kept properly moistened and placed in a sharp bottom heat of from 80° to 85°. Cuttings formed of the leaf stalk, having part of the leaf attached, with or without a bud at the base will also form tubers in the course of a few weeks; and cuttings of the stems taken off when they have become moderately firm, root freely and form useful flowering plants the second season. The cuttings should be potted singly in small pots as soon as they are rooted and have commenced growing; but if late in the season before they are ready to be separated, it will be better to let them remain over winter in the cutting pot. If potted keep them in a warm, moist situation, and encourage active growth. When the energies of the plants seem exhausted, gradually discontinue water, and allow them a season of rest in a dry temperature of about 50°.

At any time in spring, where a heat of 60° with a close, moist atmosphere is at command, turn the young plants carefully out of the soil in which they have been wintered, and repot them in small pots; water sparingly until growth has commenced, and then keep the soil properly moistened, and maintain a humid atmosphere by a free use of the syringe. Attend to shifting as this may be necessary to afford space for the roots; one moderately large shift will be sufficient,

and this should not be delayed until the roots have become rotted, as in that case the plants would probably receive a check, and it is difficult to get them into free growth a second time. When the flowers begin to appear give air more freely but not rashly, and gradually harden them for being placed while in flower in a temperature of about 55° or 60°, where they will remain long in beauty. As the flowers are impatient of damp, avoid watering overhead, and take care not to have a stagnant atmosphere at night. When the flowering is over gradually withhold water, and let the plants go quietly to rest. The bulbs should have attained considerable size by the end of the second season, and will form handsome specimens the following year. If a succession of blooming plants is desired this will easily be secured, with a good stock, by starting a few, at intervals of six or eight weeks, from January to August. Care must be taken, however, to expose them as freely as possible to light, otherwise those grown early in the spring and late in the autumn will form but poor attenuated specimens.

A soil composed of two parts rich, fibry peat, one part leaf soil, and one part light, turfy, sandy loam, freely mixed with sharp silver sand, will suit the Gloxinia perfectly. If the loam is not of the character described, it had better not be used, as a strong tenacious loam is not suitable for such tender rooted plants, its place may be supplied by an extra proportion of leaf soil, and a small quantity of thoroughly decomposed cow-dung. In potting, be careful to have the pots properly drained, and cover the draining materials with a thin stratum of rough pieces of peat.

BARTRAM AND TEMPLETON.

Mars had, and still has his votaries, the fame of whose exploits is noised abroad in every land and in all ages, claiming a large portion of the attention of readers, and affording much matter for silent reflection to the philantropist who cannot see in war that panacea for human ills which many would represent it to afford. We have a few words to say of another class of toilers in the great field of humanity —those who, secluded from the gaze of the idle and officious, free from pomp or hope of empty praise, labor arduously to learn the plan of the great system of nature. The two individuals whose names are at the head of this article, are known to scientific men generally, as two of those children of nature, who are allured to a study of her works by their own grandeur and beauty; and who surmount all obstacles, overcome all trivial difficulties and annoyances in the completion of their purpose How vast are the achievements of many of these self-taught naturalists! Frequently struggling with embarrassed means, they lose sight of their straitened circumstances and sink

their considerations of personal comfort in the all-absorbing bent of their intellects. Such a man was John Bartram, whose name adds lustre to the scientific character of Philadelphia. Such a man was John Templeton, who, in a similar position in a different sphere of action, achieved similar results in Botanical science; both have passed away from the scene of their operations—but they are not forgotten, nor shall they be.

Time effects mighty changes in the history of countries, even a century produces such as to command the attention of the antiquarian. We have only to go back a century, and we find on the banks of the Schuylkill, near Gray's Ferry, the plain and hospitable John Bartram, interesting himself in the offspring of his neighboring woods and thickets, collecting with care and preserving with attention the minute mosses, as well as the more showy flowering plants so abundant in the woods of Pennsylvania, and the various species of trees and shrubs which compose the arborescence of this rich section of country. To find a man in such a sphere of life as John Bartram occupied, devoting so much of his time to such pursuits, must have been a matter of surprise to his more practical neighbors; and it was only when chance cast in his way some fellow-student, who, in the same pursuit of natural history, had been led into his domains, that his achievements were at all likely to be acknowledged or appreciated. Science however, was in a comparatively advanced state in the mother country, and here Bartram found a mart for all his botanical novelties, and ardent friends in the promotion of his favorite science, for at this period the botanical world could number a few great luminaries. Bartram's researches and discoveries were appreciated by such men as Collinson, Sloane, Gronovius and others; and the copious biography lately published, compiled by Dr. Darlington of West Chester, has placed his remarkable achievements in botanical discovery fully on record. In forming a judgment of the value of such men, we must inform ourselves of the state of knowledge at the time in which they labored. With regard to Bartram, we may say he was alone on this continent, the most indefatigable collector of indigenous plants; but he was not content with their mere discovery—he knew that the publication to the scientific world of the riches of America's woods and marshes was the great end to be accomplished. And how precisely he sets about describing his interesting novelties—the attempts at their identification and comparison are striking and original. We need not detail the gradual course of correspondence which was carried on by Bartram and British botanists of note. By his promptness and attention to the wishes of his patrons, he became celebrated in Britain as a collector of American plants, and was respected by the most eminent men in science. His claims on those in his own immediate circle

were of no light character; he acted towards those connected with him in the most kind and affectionate manner, rendering him dear to the entire circle of his friends; his profound reverence for the Deity has never been questioned. How could it?—his whole existence was one entire worship of the God of nature. Bartram has left his name behind him, and as long as Philadelphia holds its position as a great and enlightened city, where science is cherished and knowledge valued for its own sake, so long will John Bartram's memory live, and he be ranked amongst the early benefactors of American letters.

'Tis true, a change has come over the scene of his operations; we can no longer wander along the avenues where Bartram trod, or point to the plants his reverential hand tended and caressed. The improving hand of the architect has piled up a massive palace, which has cast into the shade the humble residence of the late John Bartram—"built with his own hands,"—and the landscape gardener, urged by improved taste, has cut out new sweeps, laid down new lawns, rooted up old trees, and planted new ones. Yet transformed as is "Bartram's Garden," the spirit of the man still lingers about the spot. The noisy locomotive hurries past, also an innovation; and in another century few would know how humble was the residence of the Philadelphia Naturalist.

Bartram flourished in the early part of the last century. Of his cotemporary Templeton, who lived until the beginning of the present century, we have yet to offer a few remarks. Of a disposition much akin to Bartram's, he, like his American brother, was almost alone in his day, as far as botanical science was concerned; or, as we heard a friend express it, "Templeton lived before his time." There was no one to share the gratification he experienced, none to appreciate his discoveries. He published no work to perpetuate his memory—the fruits of his arduous labors lay on his own shelves in his own hand writing, and in his extensive Herbarium—both which have been since made available in all Botanical works touching the flora of his native country, Ireland. No compiler of British botanical works but must acknowledge himself under heavy obligations to the manuscripts and specimens of the late John Templeton, and in the arrangement and determination of the flora of Great Britain and Ireland. Unique specimens have been found in his collection which cast light on many obscure points in classification. His manuscripts and herbarium have been freely devoted to the use of authors requiring to consult them. But like Bartram, his garden was quite characteristic of him—there in wild luxuriance was to be found the rarest botanical gems—the plants of North America were there in a state closely approaching that of their native habitat, the gorgeous Rhododendron shaded the more minute denizens of western climes; and by the margin of the brook

might be discovered those plants suited to such a locality. There was here none of that formality which characterises the garden of the modern amateur. Templeton, like Bartram, has passed away; the old house, we suppose, still stands, and before it the old tree where William of Hanover tied up his horse, when he made the conquest of unhappy Ireland; and although the Botanist has long ceased to attend to the cherished favorites which were so profusely scattered about the grounds of Cranmore, (great tree), and though other less cunning hands turn over the precious leaves of his herbaria, yet he too is remembered as a child of nature. Amongst the late evidences of the riches of his collection of dried plants, we might mention that in 1847 one of the young men employed at Kew, when on an herborising excursion along the Thames, near London, found a species of fresh water Algæ, quite new to him, but very beautiful. He procured a quantity, and on his return submitted it to Sir W. Hooker for determination; it was decided to be *Thorea ramossissima*, found described in Templeton's manuscripts, with a dried specimen in his herbarium. At first sight the collector thought he had made a rich discovery, but the venerable Templeton had anticipated him more than fifty years. Bartram's name descends to posterity, associated with a genus of beautiful mosses—*Bartramia*, fit subject to perpetuate the fame of a modest laborer in the field of nature. Templeton's name is attached to a genus of Leguminous plants not very commonly cultivated in this country, of which there are two species, Templetonia glauca and retusa, from N. Holland, showy little plants from their comparatively large scarlet flowers. All science can do for such men is to give their names to fame, attached to the objects so much cherished by them.—The Philadelphian will not soon be forgotten here; and the scientific public of Belfast will also remember their Templeton for many years to come.

On the Management of Orchids.

The taste for cultivating this highly interesting tribe of plants being so much on the increase, I am induced to offer a few notes on their cultivation.

The house for their growth should be so constructed as to give them an abundance of light without admitting the sun's direct rays. The heating apparatus also should be so constructed as to be able to keep the atmosphere of the house constantly moist, and its temperature to 70° in the coldest weather. To gain the first object nothing is better than to build the house on a north aspect, where any other aspect is adopted, side lights should be introduced, and the top sashes receive a thin shading of paint—this will admit the light, without

allowing the sun to injure them. An orchid house should be rather lofty than otherwise, as it is almost impossible to maintain the regularity of temperature and atmospheric moisture, from the influence of the great changes outside, in a low, small house—while regularity in these matters is the very essence of success in orchid growing. To maintain a fine atmospheric moisture, nothing is better than to have the house heated by the "tank system," Where that cannot be commanded, a "bark pit" should be built in the house, which may be filled with any substance which will give out moisture. Sand is frequently used, but liable to some objections in unskilful hands. It will be drier at times than at others, which is opposed to that regularity with which an orchid house should be kept—I prefer leaves or moss, adding to them as they sink from decay. I have always also had a notion that the very exhalations of decayed leaves, were of vast service in the growth of orchids.

In general cultivation I would divide them into four classes:

First. Those which grow entirely on hard blocks, commonly called Epiphytes.

Second. Those which prefer to have decayed blocks, with moss or peat on it, or to be grown in suspended baskets, which I would term Sub-Epiphytes.

Third. Those which grow in soil like most other plants, Terrestrial.

Fourth. Those which are grown in pots, but with a large proportion of moss, turfy peat, or broken charcoal.

To the first class would belong many of the *Oncidiums*, *Broughtonias*, *Vandas*, *Ærides*, *Renanthera*, *Angrœcum*, *Saccolabium*, *Phalœnopsis*, *Odontoglossum*—although the 3rd, 4th, 5th, and 7th of these frequently like a little peat or moss on the block to start with. To the second class I would refer some of the *Oncidiums*, most of the *Dendrobiums*, most *Epidendrums*, *Lœlia*,*Cattleya*,*Schomburgkia*, *Brassavola*, *Galeandra*, *Camarotis*, *Fernandizia*, *Trichopilia*, some of the *Oncidiums*, *Brassia*, *Miltonia*, *Stanhopea*, *Gongora*, and *Acropera*. To the third will belong *Phajus*, *Bletia*, *Pesomeria*, *Cymbidium*, *Calanthe*, *Limodorum*, *Sobralia*, *Vanilla*, and *Eria*. In the fourth I would place some *Dendrobiums*, *Pesomeria*, *Eulophia*, *Acanthophippium*, *Ansellia*, *Peristeria*, *Huntleya*, *Zygopetalum*, *Maxillaria*, *Lycaste*, *Catasetum*, *Cyrtopodium*, *Hœmaria*, *Anœctochilus*, and *Physurus*.

The first division will require the most regular temperature, and moistest part of the house, unless the house be very moist they should be syringed lightly at least once a day. When they show symptoms of rest which will be known by the roots ceasing to grow at the points, the syringe may be dispensed with. The next division will

require occasional waterings in addition to the above treatment, and they ought never to be allowed to get entirely dry. The third class will at times require an abundance of water and good drainage, and much more light than any of the others. They have their season of rest like bulbs, when they should be kept cooler, and almost dry. They mostly prefer a mixture of sharp, sandy peat and loam. A whole chapter might be written on this division. The fourth class like the other, have their season of rest, when they require less water, a drier atmosphere, and more sunlight; but they ought not by any means ever to be quite dry, or they are not easily recovered. They are rather gross feeders, and don't like to be stinted in either pot room, or water when growing, On the whole orchids do not receive so much fresh air generally as they ought. This should to be admitted only by the top sash, and for a very short time daily—immediately before giving air, it is good to syringe the plants, and pour water on the flues or paths. Otherwise so much moisture will escape in the admission of air as materially to affect the hygrometric condition of the house, and thus do more harm than the fresh air would do good. Air may be given thus whenever the external temperature is above 60°.

In syringing, the water ought not to be suffered to fall on the flowers or buds. They frequently rot off before they expand from this cause, especially *Stanhopeas*; while it discolors many kinds in their flowers. There are many other valuable and beautiful genera in cultivation, which I have not included in the above divisions, because I have not had the opportunity of cultivating them myself. I cannot better perhaps conclude this brief sketch than by giving a list of some good kinds of the easiest growth, for the use of beginners in their cultivation.

If succesful in growing them well, they will be better prepared for managing the more difficult and fastidious ones.

Oncidium sphacellatum,
" luridum,
" flexuosum,
Cattleya Skinnerii,
" labiata,
" Mossiæ,
" granulosa,
Fernandezia elegans,
Brassia Lanceana,
Stanhopea grandiflora,
" maculata,
" Wardii,
Gongora atropurpurea,
" maculata,
Phajus Tankervillæ,
Calanthe veratrifolia,
Sobralia Macrantha,
Dendrobium nobile,
" chrysostoma,
" chrysanthema,
Eulophia Mackaii,
Maxillaria picta,
" aromatica,
Hæmaria (*Goodyera*,) discolor.
Cypripedium insigne.

No definite rule can be given for the temperature of an orchid

house, any of them when growing like a high temperature. It is generally kept too high in winter. Unlike most plants, they delight more in shade when growing, and like the full light better when their growth is nearly mature. I generally keep my orchids about 60° in winter, to about 90° or 100° in summer.

THOMAS MEEHAN.

Foreign Horticultural Establishments.

To convey an idea of the extent of the nursery establishments to be found in the vicinity of London, and other metropolitan towns of Britain, would be a difficult matter, except to those who have visited some of our largest American nurseries. I think it not out of place, however, to make a passing allusion to some of them, in order to inform our readers whence are obtained some of the novelties we hear so much talk of at horticultural exhibitions, and about which there is so much written in the pages of the "Florist." Nursery establishments, like all other trading concerns, are subject to changes from prosperity to adversity; from the possession of one person they pass to that of another, and some of those once celebrated now stand only as second or third rate; and many have quite fallen behind the time.—Loddiges' was once celebrated as the great receptacle of new and rare plants, Orchids, Heaths, Palms and Camellias; and the extent of glass in this establishment astonished the visitor. We once spent a day here in company with Dr. J. E. Planchon, and were much gratified by a minute inspection of the riches of the collection of Conrad Loddiges & Sons, of Hackney, London. The houses all communicate with each other, and form a quadrangle, so that the visitor once entered, does not pass into the open air till he has inspected the entire collection. The specimens of Palms were gigantic and numerous, and were growing in almost wild luxuriance. But what a multitude of Orchids from all parts of the Tropics, amounting to almost 20,000, plants supposed by the owners to be distinct, and numbering 1650 in their printed catalogue. We met but one individual in the entire ranges of glass, and that individual was the indefatigable Loddiges himself, working amongst his favorites. We requested a catalogue, and one was handed us of forty pages and gilt edge; and what treasures are enumerated in that catalogue!—treasures which the enthusiastic owner often refused to part with, even if a reasonable price were offered; but the auctioneer, we believe, has had his hammer hanging over the valuable plants found alone in this great depository; and we do not make a mistake when we state that even Philadelphia can boast of possessing her portion of them.

But following up the Hackney road, we arrive at another great Horticultural Emporium. The Nursery of Hugh Low & Son is situa-

ted here. As Mr. Low is well known to the trade in America, and respected as an enterprising nurseryman, we need not dwell on the character of his establishment; whatever is novel or valuable may be found in the collection of Hugh Low & Co; and if any amateur wants a plant, Mr. Low will let him have it, if he can. The conservatories of this vicinity have been enriched from his collections, and no doubt he finds himself nothing the worse for dealing with Philadelphia merchants. The Amherstia was one of the latest novelties imported from him. He has imported many rare plants from Borneo and the adjoining region, as his son was connected with the Rajah Brook, whose singular exploits amongst the Sarawaks created some noise a few years ago. It was by this means that the famous Gutta Percha was introduced; a living plant was obtained with much difficulty, and named by Sir Wm. Hooker *Isonandra Gutta*. Orchids are imported by Mr. Low in large quantities, and frequently sold by auction immediately after their importation. We may rank Mr. Low's as amongst the first class nurseries.

Taking another route through the great metropolis, we are led to Pine Apple Place, the establishment of Henderson & Son, where there are to be seen very fine specimens of new and rare plants. The place is not so extensive as some others of its class, but many fine plants are spread throughout the country by this enterprising firm. New Holland plants, such as Acacias, Boronias, Eriostemons, Croweas, Pimeleas, &c., are more particularly attended to, and Heaths are cultivated with success. Orchids also attract a share of attention. In connection with this nursery was once a flourishing mutual improvement society where gardeners met to debate the different doubtful points in their profession, and to impart to each other the experience gained in the various operations of horticulture. Mr. Appleby, foreman at Henderson's, took a prominent part in the proceedings, and Charles Moore, now curator of the Botanic Garden at Sydney, also enlightened the greenhorns as they came up to London to the nurseries, from the Duke of Buccleugh's, and other places far north and west, to be *cockneyised*. And thus has the science of Horticulture been elevated, and we hope it will yet be elevated to a higher point of excellence.

But we have yet more examples to furnish of the spirit which London infused in the "chiels o' the Bothy." We have to go to Chelsea, where old Joey Knight has done so much to improve the profession. The establishment of the Messrs. Knight & Perry, King's Road, Chelsea, is also an extensive one, and we believe few employers have done so much to improve the moral standing of the profession. The reputation of this firm proves that there is some merit in attempting to rescue the gardener from habits of slothfulness and ignorance, and teaching him a better system of life, and a plan of action whereby he

may appreciate the beauty of the objects amongst which he labors — But we must first state that this is a first class nursery, and has been the means of producing many valuable plants. The well diffused Plumbago Larpentæ emanated from this place, as many, we believe, as 2000 plants having been propagated, worth $10 each—such is plant business in the great Metropolis. Attached to this establishment, which consists almost exclusively of conservatory and stove plants, is a lecture room and library, with chemical apparatus, &c., for the use of those employed in the garden; and interesting debates are carried on on all subjects of horticultural interest. Mr. Knight endeavors to improve his men while attached to his establishment, and no doubt his exertions are appreciated. Many splendid specimens of rare and valuable plants are to be found in the collection, and no one should visit the horticultural establishments of this neighborhood without looking in at the King's Road Nursery, Chelsea. In the immediate vicinity is the garden of the United Gardeners' Society, where the Victoria bloomed in the open air, and the Stenocarpus Cunninghamii outran the old Kew specimen. Alas, poor Kew! how thy gardeners are doomed to be outstripped in the honorable race of merit and skill in cultivation. But we will close our second chapter on foreign horticultural establishments; for we hear the noise that the first chapter has made already gathering about our ears—for there is a gun from Albany, where the working gardener hailed from in the spring; nothing less than a side shot at the great "Hercules" himself—

To the Editor of the Florist.

ALBANY, Nov. 19, 1852.

DEAR SIR:

In reading your article on Foreign Horticultural establishments, I have been struck with your remark about the great reformer, the Hercules of the age, &c. This Hercules, as he is modestly styled, has certainly done something that Hercules, the son of Alcmene and Jupiter never did. He killed the Hydra of Lerna, suffocated in his arms the giant Anteus, and other things—our modern Hercules has neither killed or suffocated anybody that I know, but in his Titan labors he may boast himself to have severely wounded the tongue of Homer, with his Myanths, Spiranths, &c. Yes, *Spiranth*—do you not hear at once how this name anglicised from the Greek Spiranthes, is much more intelligible, much more easy to keep in mind? Certainly it is more easy. Spiranthes, Spir-anthes, that is horribly difficult; while Spiranth! do you not hear how harmonious and plain it sounds in English? Perhaps you will say that everybody has his own taste, that some persons, for instance may prefer to call and write Maxillaria stapeloides simply, while some others may prefer the English name "Jawplant," "carrion flower." "De gustibus non disputandum."

However, I would rather, and many besides me would, that instead of the Herculean labor of anglicising Greek names, when every day, the English as well as other tongues must be Hellenized, if I may say so, for want of proper expression, he would try to kill the Hydra of misery, which has more heads than the serpent of Lerna or to suffocate that other Anteus of ignorance and superstition which degrades and brutifies so many millions of men. Your remark struck me so much the more as I had an idea, that this great promoter of useless reform—who, with J. J. Rousseau, thinks that a man can be a great botanist without knowing the name of one plant! strange aberration! that this man would not perhaps write a word to eradicate the vices which consume society, nor give a farthing to alleviate the misery from whence the same vices are derived. If he is such a philanthropist as to reform the Greek names of plants for the benefit of gardeners and the illiterate, for I suppose he does not anglicise these names for scientific men, for the learned, for Decandolle, De Jussieu, Asa Gray, Torrey, Blume, Brogniart, De Vriese, Fischer, &c.; for these men without being Hercules, know as much about Alpha and Omega as he does: but although he is a philanthropist, and I am only a proletarian, and would be no doubt an outcast, to the gentleman who lately christened the Saxe-Gotha, and Fitz-Roya, (by the way, how will he anglicise those names?) I will tell him how he would be a useful reformer; but perhaps you do not allow men of my stamp to give advice through your columns, so I will keep my advice until it is called for.

I think with you that the magazines should not be filled with tirades against British and other gardeners, when these gardeners shall have tried to make their deeds agree with their talk; when their words will be consistent with their actions, when they shall have shown to the American Horticultural public, not that they have done this or that at home, but have done it here, in the United States, in the grand Republic of America, the home of all of us.

Gardeners will be respected as other persons, when they shall have made themselves respectable; when most of them have ceased to consider themselves as mere lacqueys; when they will have the sentiment of their own dignity; when they will command the respect of their employers, not by the idle talk of having been the gardener of such a one, but by their doings and good behavior; when they will have instructed themselves in their art, for I call gardening an art—an art which is villified by a large majority of those who practise it. If gardeners are not better considered in most cases it is their own fault: What do most of them care for? High wages and little to do. Let the employer be satisfied or not; as long as he pays, that is enough: and do they think such principles deserve consideration—I do not.

One piece of advice I would give Dr. Lindley, that is to lecture them (the gardeners) on the subject of paying a little more attention to their education, and of spending a little more of their savings in procuring themselves means of instruction, and less in buying that "for poison to green flies, if to nothing else."

I see that your reflections, about the tirades against gardeners have been suggested by the recollection of an article in the June Horti culturist of this year, which article I do not myself entirely approve. I did not like that sort of personality to one nation, the Irish—for if ignorance and vanity can be personified under the name of "Paddy," or "Paddies," I am sorry to say, that in my opinion there are Paddies in all countries of the world—there are Paddies on the banks of the Thames, of the Clyde, of the Seine, and of the Rhine, as well as on those of the Liffy. "La sottise humaine" inhabits all quarters of the globe.

I think with you that you do not look too far into the future, when you believe that a new state of things in Horticulture is approaching. Only stimulate—stimulate, and encourage communications like that of "Philarvensis,"* and Brougham, on the Penna. Horticultural Society; and above all, do not forget that "the Light springs from the Shock."

ANTHOPHILUS.

* Qui fait aimer les champs, fait aimer la Vertu.—DE LILLE.

EXETER, ENGLAND, JULY 12th, 1852.

[CONTINUED.]

This place is famous for two of the most spirited nursery establishments in England, and we were going to say more famous for being the place from which the celebrated, and ever to be celebrated Devoniensis Rose emanated. It is about eight years since we imported two plants of this favorite tea rose, at a guinea each, and strange to say, by the mere force of competition, it was sold in Philadelphia within six months after importation for 25 cts. Its merits became known, it took the ascendant, and has till now maintained its position.—Roses, fancy trees and rare plants are the great staple of the Exeter nurseries. I saw within an enclosure of about two acres, more new and rare plants than there is to be found in any other spot of Europe; plants of irresistible beauty. Purchase! You must purchase—I did. We here saw a large bed of the California Pagoda plant. No doubt Mr. Editor many of your readers have had seeds sent from their California friends, under that attractive name. I received and cherished with care such a parcel, and intended to turn them some day into the root of all evil; but behold! what was my surprise to see it here in quantity just to be let out to the public for the first time, under the name of *Collinsia monticolor*, a very beautiful annual.

In this mild and rich climate, very many of the fine half tender shrubs, such as Fuchsia, Ceanothus, Clianthus, Fabiana, Mitraria, Escallonia, &c., stand out and flower with the greatest magnificence. We could not pass without noting a plant about 4 feet high, of Mitraria, covering a wall, and loaded with its large inflated scarlet flowers, really magnificent; and close by it was a large bush of Escallonia macrantha, a fine shrub with very shining foliage, of symmetrical habit and profusely covered with its rosy red blossoms. I noted at once, "if it proves hardy in Philadelphia it will stand A. 1," as the insurance brokers have it. I could not but chide the inert perceptions of many of our shrub planters who do not purchase (and in fact they will not be persuaded to do it) the very interesting family of Berberis; they are all lovely, and the evergreen sorts are beautiful at all times. Berberis fascicularis, illicifolia and Darwinii are indispensible low evergreens, covered in early spring with a profusion of yellow flowers, succeeded by a load of bright purple fruit. The Araucarias and Deodar Cedar grow in wild luxuriance and form very beautiful objects amongst the dwarfer evergreens, which are at present in such demand, and will continue to be. How spring like will it be to see our surburban residences clothed in perpetual verdure; it will give a life and expression of cheerfulness to our cheerless, tame and forlorn looking country seats. A country residence without evergreens appears to me like a half clothed man, with the thermometer at zero; give the same situation a liberal supply of the evergreen tribe, and you at once make it appear as if prepared for the storm.

Our attention was also arrested by several new fruits: The Kaisha Apricot and the magnum bonum Raspberry were well worth note. The kernel of the former is as palatable as a sweet almond, and the latter has all the qualities its name implies—a very rare character in new things. I have no doubt but some of your choice Philadelphia amateurs may fruit both of these next season, when we hope to have your opinion on their merits. In small fruits and large fruits, in taste and garden ornament, we are in Philadelphia, behind the age. In decorative painting, furniture, carpets, mirrors, equipage and dress we are up to the mark; but they are mere visionary objects, soon get out of fashion, out of favour, are readily soiled, and require constantly to be renewed. With good fruits, fine trees and gorgeous evergreens, they grow every year finer, we become more attached to them, and their fruits yearly increase; if they are more than our household demand, our friends are near us, or the market is at hand. We opine that in the county of Philadelphia, there will be more fruit trees planted within 12 months from this date than there have been in any two preceding years of her history. The pinaster and Black Austrian Spruce are much used in belting and shelter; they are very prominent

objects in the landscape; the former tapering, and the latter dark and dense; both of rapid growth, and much neglected in our ornamental work. It is true that large trees cannot be obtained of them in the United States, but they are both of rapid growth, and in good prepared soil will, when well established, grow from 2 to 5 feet every season; so that a tree of 2 feet high when planted, will be 15 or 20 feet high in ten years, or 40 feet high in 20 years, and they are trees that will succeed well in our climate. The transplanting of large evergreens, or indeed large trees of any kind, is more an object of talk than a permanent ornament. How many failures are before my eyes, and the eyes no doubt of many of your readers—we will quote you one: On the Ridge road a few miles north of Philadelphia, about 7 years ago there were planted on a country seat some three or four dozen of large Balm of Gileads, interspersed with a few of about 3 or 4 feet high. I recently saw the remains of a few of the larger that appeared to be mere skeletons, unsightly objects, not a passable tree amongst the $400 lot; whereas the smaller trees are now 10 or 12 feet high, and very perfect in shape and aspect; and if the soil had been properly prepared for them, they would have been by this time 20 feet high. This property is now a cemetery, or I would not have taken the liberty to have brought the subject to your notice. *Nil desperandum* should be the motto of the planter—never despair; if your plant has roots give it good soil, a dry bottom, and our exuberent climate will make it grow, if its nature is suitable to our summer sun.

R. Buist.

Agriculture—Green Crops.

BY F. W. CONNOR, DUBLIN.

I would furnish you with more copious remarks on the different subjects connected with farm operations, but that I am aware of a great diversity of climate and system prevailing in your country and ours. I can only therefore safely expand on these matters which cannot be affected by such differences, and confine myself to the record of progress making amongst farmers here. Much has been said about your American machines, and much has to be done to make them available to the tenant farmer; indeed they only serve in cases of farms of great extent, which are few in this country in comparison with those of a few acres. Machinery is only applicable to agriculture, where carried out to the greatest extent; and we like better to see a happy rural population, with small and comfortable homesteads, than the vast tracts of half cultivated territory, over which sheep run in wasteful herds. In your country the case is different, there as yet the land is abundant and thinly peopled, and therefore operations must be carried on with little manual labour, so that machinery is a necessity.

The following few remarks on Green Crops I offer, as the subject is an important one, and if they do not agree with the requirements of your climate and practice, you will please modify them to suit.

The term "green crops" is applied to turnips, carrots, mangel wurzel, parsnips, rape, vetches, cabbages, grass when consumed for soiling purposes, and potatoes when fed on the farm. To derive all the benefits from the culture of green crops, the latter must invariably be consumed on the farm, not sold, as is generally the case with the potato crop, but manufactured into manure, remembering the old proverb, "muck is the mother of money." By the cultivation of green crops we are enabled to adopt a regular system of cropping—to keep our farm uniformly and judiciously fertile, from the abundance of manure derived from the feeding of cattle on nutritious crops.—There is no land, possessing any tillage capabilities, but can, with the present appliances for improving the soil, be rendered fit for green crop cultivation, from the light sands of Norfolk and the sandy soils of New Jersey, to the clays of Pennsylvania and the tenacious clays of the coast of Guinea; we read one and the same lesson, viz, that by judiciously cultivating green crops, we create a power capable of ameliorating the physical imperfections of the soil. The culture of green crops enables us to maintain more cattle, of a purer breed, and to keep them in the best condition. Green crops are not so exhausting as grain. The turnip possesses large leaves, which as organs of nurishment takes a good deal of food from the air, and consequently less from the soil—whereas a grain crop, wheat for instance, possesses a narrow system of leaves, is allowed to ripen its seed, which latter is sent to market, and sold, making little if any return. In fact in selling crops we but sell so much of the fertility of our farm. Now the turnip being a biennial plant, is generally consumed before its seeds are matured, hence, it is not so exhausting as a crop of wheat. Again, manure can be *directly* applied in almost any quantities to green crops without injury—not so to a grain crop, for such an application would encourage the growth of the straw, at the expense of the grain.—Turnips and carrots &c, yield from five to seven times the actual quantity of food that corn crops do; and since stock follows subsistence, it is plain, that a crop which will produce five times more food than another, would feed five times as many cattle. And if the farmer's aim be to raise the largest crops, at the smallest cost, in the shortest time and at the least expense, is it not his interest as well as his duty to fix his attention to those systems of culture, that would produce large returns, unattended with undue exhaustion of the land? The growth of turnips, carrots, potatos, &c, allows the soil to be freed from weeds, hence, such crops are appropriately termed *cleansing* crops; as also *restoratives*, because as they are generally, as they should

always be, manured—the manure *restores* those substances to the soil which previous crops extracted from it. From the tillage which the land undergoes, the thorough pulverization, the constant working of it during the after culture of the crops, immense advantages result.—The principle manures employed in the raising of green crops, are farm-yard manure, bones and guano. Agriculturists prefer using one or other of these conjointly, rather tha depend upon the use of one alone. Thus 15 tons of good farm-yard manure, and 3 cwt. of Peruvian guano is a fair application for a statute acre—or 6 bushels of dissolved bones and 3 cwt. of guano. The minute state of division of the bones and guano, enables the young plant to feed with facility, and consequently progress rapidly, and overcome those impediments to its infant development. For the plant is just like the young animal, if either be curtailed of the necessaries of life when young, the result will be a stunted development. *Warm* manures are good for all descriptions of green crops. How carefully, therefore, we should attend to the manufacture of manure, not to allow a particle of it to run to waste; for if we overlook the drainings of our cattle sheds, stables, and manure heaps, we have no great right to make any complaints as to the unremunerative character of our crops.

I shall continue this subject in my next—give a succinct account of the preparation of the soil, for the commonly grown green crops—their manner of sowing, cultivating, &c. After which I promise you a few letters on "manure."

CALENDAR OF OPERATIONS,

FOR DECEMBER.

Written by Practical Gardeners, for the Philadelphia Florist.

HARDY FRUIT.

Grape Vine Borders.—If the planting of grapes is contemplated the present season is suitable for the preparation of the border, and we will briefly refer to a few considerations necessary to be kept in view. There are so many conflicting opinions and advices, promulgated upon this subject, that it is difficult for a beginner to know where to begin, or where to end. We do not by any means expect to put an end to all further "cavilings" on th s subject; but every one admits that thorough drainage is an indispensable preliminary to the cultivation of all exotics, and the grape more especially delights in warmth at the roots, a condition it cannot enjoy without a proper outlet for superfluous water. In gravelly, or sandy sub-soils perhaps, no artificial preparation is requisite, although even in these cases 6 or 8 inches of drainage will be of advantage. In retentive clayey sub-soils, the bottom of the border should have sufficient slope to carry the water freely off into a drain embracing the whole extent to be occupied by the roots, a depth of 12 or 14 inches of drainage should be laid on the bottom; this may consist of brickbats, oyster shells,

bones, charcoal, stones, anything that will allow water to escape. It cannot be made *too* dry—in reality draining does not *dry* the soil. All soils have their respective absorbing properties and after they have absorbed as much water as they can retain, the rest will pass away by the drains, otherwise stagnate and cool the soil.

Next in order follows the material for the roots to feed in, and without much comment upon the practice of others, we will state the method we practise. Premising, however, that we have "gone through" the greater part of the various receipts recommended during these last 10 years, such as, dead horses, dogs, dissolved bones, slaughter house offal, guano mixtures, poudrette, and *heavy dressings* of barn yard manure. Our advice to beginners then would be—Mark off the breadth you intend the border to extend, there is no limit in this respect, we are content with 12 or 14 feet, but make it as much wider as you please. Now commence at one end and throw out a trench 4 feet wide and 2 feet deep if the sub-soil is gravel or sand. If clayey, dig down 5 inches farther and fill up the space with drainage materials. Throw the next 4 feet trench into the open space, rejecting all the bad soil you meet, laying down sufficient drainage in the bottom of each trench; if necessary, to prevent the soil falling among the drainage throw a sprinkling of short litter of any description over it, a rough sod with the grassy side down is best. When the whole length of the border has been treated in this manner, fill it up to the desired level with turfy sod, chopped up coarsely and mixed with a fourth part of charcoal or broken bones. Trench it over again in the opposite direction, then lay on 4 or 5 inches of well rotted horse manure, and spade it deeply in. In such a border the best grapes will be produced, and the plants remain healthy and fruitful for half a century. True, it will not be so "open and porous" that you can sink up to the knees in it, neither will it "collapse" 10 or 12 inches in as many months, tearing and rending the roots in the process as we have actually seen occur in borders "rich in organic matter." "Oh! but the grape is a gross feeder, and your two feet border will be burned up in summer." A "gross feeder" so is a cabbage when planted on a dunghill. We protest against this *gluttonous* character so frequently levelled against this generous exotic now-a-days; after many years' observation of its habits we believe that it enjoys more robust health and gets through its yearly labors more satisfactorily to itself, and profitably to its owner when kept on rather "spare diet. Even allowing it to be a gross feeder there is no reason for indulging it in such an unnatural propensity to its manifest injury. Perhaps we are behind the age, but we prefer setting all fruit trees in rather poor soil, so that it is healthy and free from excess of water. It is an easy matter to apply stimulants when the plants stand most in need of it, viz: when ripening the fruit.

We cannot suppose for a moment that any one who has tried the introduction of "carrion" to the roots of grapes, would recommend the practice to others. We have met with many who have tried and all strongly condemn it. We have also met with a few who spoke highly in favor of it, but on questioning their experience, the fact always came out that they had'nt tried it, 'but the grape being a gross feeder,' &c. From what we have seen, we believe the roots invariably rot immediately on coming in contact with decomposing animal substances. In cases of its application where the plants apparently suf-

fer no injury, it will be found that the roots have preferred an opposite course.

An instance somewhat in point occurs to our recollection. The circumstances were these. A border was made and well arranged in all its details. A breadth of four feet next the house where the grapes were planted was filled up with a mixture of turfy sod, leaf mould, and horse manure; the balance was filled with a mixture of turves, and a large quantity of dead animals and slaughter house offal. The vines made fine healthy growth for two seasons and loud was the praise in favor of exciting composts for grape vines. The third season they started in an equally promising manner, but during the summer, the bottom leaves began to drop off and the points of the young shoots turn black. This was rather an unwelcome occurrence. The owner settled the matter to his own satisfaction on the supposition that the check was caused from exhaustion of the exciting materials. It was clearly perceptible to every one but himself that their former health was due to the soil free of these noxious ingredients, and when the tender roots came in contact with them, the consequence was as stated. But—

"A man convinced against his will
Is of the same opinion still."

And the last we heard of him he was making preparations for an additional supply of his elixir.

With regard to depth, we maintain that two feet is sufficient.—There are many advantages derived from having the roots near the surface, and it is a simple matter to protect and keep them there, even under the brightest sun. This is effected by *mulching;* even a few inches of tan bark will preserve the moisture. Short grass, anything that will lie loose, is equally efficacious. Basing our remarks on facts, we have during the past three summers closely observed a border sloping from 16 inches to 2 feet, in a breadth of 12. The subsoil is a heavy clay, and there is a depth of 12 inches of brickbats under the whole area. About the middle of May it received a coating of short stable manure, about 4 inches in depth, and frequent investigation during the season showed a sufficiency of moisture. The Grape Vine is far from being an aquatic, it prefers a hill side to a swamp; neither is it carnivorous, sending its roots into a mass of brick rubbish rather than into a dead horse. S. B.

HINTS FOR DECEMBER.

Hot-House.—Very little more can be said of this department than was suggested last month; being a time of *comparative* leisure in some things, attention can be paid to the destruction of insects. The red spider is not confined by any means to dry atmospheres, though in moist ones it does not appear to be so much "at home." The mealy bug is most common in warm, moist atmospheres; the scale and thrip in all situations and places, from the dry and hardy pit, to the warm and moist atmosphere of the orchideous house. The old and probably best antidote for the red spider is sulphur—not ignited or put in the flues, but sprinkled all over the plants in the morning before a fine warm day; in a day or two after, the plants to be syringed with a weak solution of lime water, prepared by putting a lump of unslacked lime in a tub of water, letting it remain till clear. In using it for syringing, put about three-fourths of water to the lime water. Occasional

doses of this kind will keep the spider "pretty tight." The mealy bug is readily killed by hydro-sulphate of lime; this is made by putting sulphur and unslacked lime together, mixing with water, and stirring. For use, a tea-cupful may be put to four gallons of water, to syringe over the plants. Scale are killed readily by strong soapsuds, or a weak solution of whale oil soap. Thrip and aphides by the well known application of tobacco smoke. Hyacinths that are desired to flower early, and have been plunged out of doors, when brought in should be placed for some days in the coolest and darkest part of the house, and receive very little water. All these things to be increased gradually, to avoid injurious checks.

In the Greenhouse, attend to what has been said in this journal on ventilation; it is one of the most important subjects connected with plant growing, and ought to be thoroughly understood. When plants are not growing and it is desirable to rest them, they require no air; if the temperature rise higher than is desirable, open the top sashes or ventilators; as the heated air escapes the cold air will find its way in somehow to take its place. Be very cautious about opening side ventilators; the sudden rush of air by them often gives the plants a check from which they seldom soon recover; if the air admitted is not even near the degree of cold the plant will bear, a sudden change is injurious. A house suddenly lowered in its temperature but six or eight degrees, will receive more injury than a gradual fluctuation of twenty or thirty. Many a house of yellow, sickly-looking, stunted plants, supposed to have been brought to that condition by bad drainage and over-watering, owe their "woes, and wrongs, and ills," to sudden checks caused by injudicious admission of draughts through side ventilators.

Flower Garden.—Much has been said on the protection of half-hardy trees from the frost. In many cases all that is necessary is to shade them from the sun; frost itself is not so injurious to vegetable structures as is the sun suddenly thawing it. The true reason of this is not rightly understood:—the latest idea is, that the sap on being expanded by the frost is forced into the air chambers, when the sun by its warmth, expands the air and forces it in the cells—thus, when the whole is thawed, causing different agents in processes to change places, producing disruption of tissue and engendering decay. This will show the utility of even very slight protection to favorite tender things.

The Vegetable Garden has still some attractions. Seakale is a fine dish when blanched; where leaves are abundant to cover them with, it is "clever." In England they have "seakale pots"—here we can nail old boards together for "pots" to place over them, about eighteen inches deep; place these over the crowns of the roots, and put a loose piece of board over the top of the box, then cover all with the leaves; it will be ready for use in about two months. Spinach and Lettuce may be protected by sprinkliug light litter sparingly over them. Parsley ought to have a small frame over it if desired in winter, or a few roots carefully taken up, planted in boxes, and placed in a cool greehouse.

Ice House. Where there is a gardener kept this is under his superintendence. In giving directions for this department, we cannot do better than explain the principles on which the preservation of ice depends. The main thing of course is, to keep the temperature of

the house below freezing point. To do this we have to take measures to exclude the *external* air, and secondly to prevent the natural *warmth of the ground* from affecting it. To this end the bottom and sides should be hollow, so that there may be a stratum of air enclosed between two faces, these communicating with a ventilator at the top, whereby any heat which may arise, can escape. Where it is desirable to keep ice a very long time, or without much waste, the hollow sides might be made *double;* this would prevent entrance of heat, either by radiation or conduction. In collecting, the largest and thickest lumps should be chosen, as they will be fewer air cavities in the whole mass when the house is filled. Shavings is the best material to cover the whole when finished, being less liable to decay than straw, so giving out less heat by decomposition. Ice wells are of the last age. Houses above ground can be made to keep ice longer than the very best wells, besides being cheaper, more easily managed, and less troublesome in keeping in order. T. J.

The Florist and Horticultural Journal.

Philadelphia, December, 1852.

But a few years ago, and American horticultural literature was unknown. What had we even ten years ago that was worthy the name of a horticultural magazine—what encouragement had the horticulturist to devote his time and attention to the instructing of his countrymen in the beautiful art. A few years have rolled by and the aspect is quite changed—now the fear seems to be that the serial literature of gardening is about to be overdone. The "Horticulturist," under the able conduct of the late A. J. Downing, appeared to have established itself as the authority on these matters. Hovey's Magazine, from the experience of its conductor, has attained a respectable character. The Western Horticultural Review claims a share of consideration as the exponent of the principles carried out in the western portion of the Union. Amongst the vineyards and strawberry plantations of Longworth, it has at least a fair opportunity of elevating itself under the editorship of Dr. Warder. The Ohio Cultivator demands attention, but its sphere is more agricultural than horticultural; it is, however, one of the most reliable of its class. Then we have the "Soil of the South," and Southern Cultivator, professing to watch over the more immediate interests of southern cultivation, so different in all its details and operations from that carried out in the northern states. All these have their chosen and separate spheres of action. They do not as yet encroach upon or clash with each other—we believe there is room for many more. We have yet in the north the Farmer and Artizan, of Portland, Me., and in the west, the Farmer and Dairyman, all good and useful in their way. The agriculturists of New York have the Albany Cultivator, the Rural New Yorker, the

Genessee Farmer, and many others which we have no acquaintance with directly. And the Working Farmer, not least in the list, must not be overlooked. We are glad to know all these, and to exist on terms of intimate friendship with all of them. We may now ask, what has Pennsylvania to offer as an offset against all these?—or rather, what had Pennsylvania, at the beginning of the present year, in horticultural literature? Nothing, but a farm journal that professed to interest itself in any way in gardening affairs. We launched the "Florist and Horticultural Journal" hopefully on the waters, destitute at the time of any craft similar in character; and now we are about to fit her out anew—we are about to solicit an increase and continuation of the support already bestowed upon us. But we cannot be content to lay behind all our cotemporaries, limited by the mere nominal charge of one dollar per annum for more than 400 pages of the best practical information, and several colored plates which cost all the money. We must rank ourselves in cost, as well as value, with those respectable periodicals which now benefit the community by their valuable information.

Requirements of Horticulture in the U. S.

Horticultural science in this country is yet in its infancy. We have not yet arrived at that point of luxury which lavishes on the park, the conservatory, and on the gentleman's kitchen and fruit gardens, sums equal to the income of some of our richest men. Nor will the demand for such things here permit of such vast nursery establishments as are to be found in England, or on the continent. As this country grows older, we shall advance in wealth and extravagance, it is not now a new thing to have salads and other vegetables grown under glass during the winter season, but no one thinks of growing cucumbers yet, from 3 to 30 shillings sterling a brace. But we shall no doubt come to that.

Some very large prices have lately been paid for rare and fine plants, by the amateurs and nurserymen of this neighborhood, but we little realize the money expended by English noblemen, in enriching their collections with the rarities of other continents. The Duke of Devonshire, and the late Earl of Derby, had their collectors in India and in South America, as have the Botanic Gardens, and the larger nurserymen.

It may yet require many years before we cease to depend on Europe for rare plants; even those of our own continent we receive second hand from there; the plants of California and New Mexico, the Cacti of Mexico, the Orchids of Central America, and all the rarities of tropical South America, which are so much nearer to us, we give profitable prices to foreign nurserymen to send back to us across the

Atlantic. While we are thus dependent as well for plants, as for scientific knowledge of their treatment, and their structure on the cultivators and botanists of the old world; we require periodicals which shall announce to all classes of Horticulturists, whether amateurs, nurserymen, vegetable growers or kitchen gardeners, the latest additions to the stock of plants, esculents, fruits, &c., of our contemporaries across the water, as well as the improvements in culture, discoveries in science, and all such material information as is most needed in carrying on well managed places. This want has heretofore been supplied in this country by but few magazines devoted to this department of science; there is room for more. In all parts of the country Horticultural Societies are springing up, and every where the increased taste for floriculture is showing itself in well laid out gardens, and neat greenhouses. Surburban residences are more sought for, and the inhabitants of cities, instead of, as formerly escaping from town to suffer the penance of fashion, in the small rooms and crowded saloons of watering places, seek their quiet villas, within reach of business, at the first appearance of summer, there to luxuriate in the green shade of our beautiful woods, and to enjoy every morning and evening, the varied beauties of well kept flower-borders.

We intend all this as prefatory to the announcement that the coming volume of the "Florist" will be issued under different auspices, and in better style than at present. Arrangements have been made to procure plates from Europe, in correctness and artistic merit surpassing anything that can be procured here; and with each plate will be a contribution from one of the most celebrated continental botanists. Contributions will also appear from eminent scientific gentlemen of our own country, on Botany, Entomology, Pomology and Agriculture. Selections will be made from the English and Continental magazines, of such matter as will be of most importance to our readers. Regular contributions will appear from some of the most able contributors in the United States, and all the news, foreign and domestic, relating to the subject, will be given in each number.—The price will be increased to two dollars a year, and it will be decidedly the cheapest magazine of the kind in the country. The present volume will be hurried through, as we wish to start in January with the new volume; with this view we issue the present number, and shall endeavour to issue the remaining ones before the first of the year. Persons wishing to subscribe will please send their names, and the names of as many of their friends whom they can persuade to do likewise, as soon as possible to the Editor of the "Florist," No. 63 Walnut Street, Philadelphia.

The Pennsylvania Poultry Society's exhibition was held last week.

Pennsylvania Horticultural Society.

The stated meeting of this Society was held on the 16th Nov. This being the Chrysanthemum night, there was a fine display, principally of the Pompone varieties; collections of twelve shown for competition were staged by Messrs. Buist, T. Meehan, gr. to C. Cope, Esq., H. A. Dreer, Parker, and others. Mr. Buist's collection obtained the first premium. Thos. Meehan exhibited from Mr. Cope's houses a handsome collection of green and hothouse plants, embracing Bilbergias, Tillandsia, Crowea, &c. also, three new plants shown for the first time. Some very fine pears were exhibited, and collections of vegetables by A. Felton and Mr. Ripka's gardener. Several designs and bouquets were shown, and a stand of Chrysanthemum blooms, embracing nearly fifty new varieties, by John Bell, gr. to J. F. Knorr, Esq. A very large Pear from France was shown during the evening, weighing near two pounds. Mr. H. W. S. Cleveland acted as Secretary in the absence of Mr. James.

New York Horticultural Society.

A special meeting of this Society was held on 22d Nov., Shepherd Knapp, Esq., in the chair. The report of the committee on diplomas having been read, was referred back, with power to lithograph. The committee on nomination presented the following officers for election.

President, Shepherd Knapp; V. P's., W Coventry, H. Waddell, Wilson G. Hunt, Nicholas R. Anthony, W. W. Livermore, John Groshon; Treasurer, Jacob C. Parsons; Rec. Sec., George W. Curtis; Cor. Sec., P. B. Meade.

☞ The article on the Gloxinia should be credited to the "Gardeners' Chronicle."

Errata.—P. 231, for "singular acquaintance" read "singular unacquaintance;" and p. 232 in two places for "unusually" read "usually." These last were corrected in part of the impression.

TO CORRESPONDENTS.

The present volume will be completed by the issue of two double numbers—one on the 15th and the other on the 31st December—the new volume to commence in January. Those who have not received all the numbers will either be furnished with them, or credited with the balance due them in their subscription for the new volume.

Communications are acknowledged from Wm. S., Baltimore; T.M. Pa.; F. Norton, N. Y.; Hortus, Phila.; Anthophilus, Albany, some of which have been held over till next number.

Postmasters and others are requested to act as agents for the Florist. We have received new subscribers from J. Zimmerman, Lancaster, J. S. Downer, Elkton, Ky., C. Lutterloh, Fayetteville, F. Norton, N. Y., W. Gain, Savannah, and others, to whom we are much indebted.

THE

PHILADELPHIA FLORIST

AND

HORTICULTURAL JOURNAL,

A MAGAZINE OF

Horticulture, Botany, Agriculture, and the Kindred Sciences.

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ON THE PELARGONIUM.

Probably there is no flowering plant that has been so long popular and familiar to everybody as the Geranium, or rather the Pelargonium. It is generally the first thing thought of for a parlor window; and indeed it would be difficult to find a substitute, as it seems to accommodate itself to any treatment short of downright neglect. It is well worthy, however, of all the care that can be given it. The diversity of color, delicate tints, and beautiful pencillings of some of the new varieties are not excelled in any other flowers. Although they will *live* under very indifferent treatment, still to bring out their true character some little timely attention is requisite. The following remarks upon their treatment may therefore be useful to beginners.

"The family of Geranium has been divided by L'Heritier into three distinct genera—1st, Erodium, having five stamens, five nectariferous tubes, scales and glands, and the awns of the fruit twisted and bearded. 2nd, Pelargonium, which includes most of the Cape species, having seven stamens, an irregular corolla, and a nectariferous tube running down the peduncle. 3, Geranium, having ten stamens, a regular corolla, five nectariferous glands at the base of the longer filaments, the awns of the fruit being neither bearded or twisted."—*Am. Med. Bot.*

Of these, the Pelargonium is the most showy, and has been most improved by hybridization and high culture. Recently the Geranium (of which the Horse-shoe Geranium is a familiar example) has also attracted the attention of florists, and many beautiful varieties are now produced.

To grow the Pelargonium to perfection, the plants should be annually pruned down to within five or six inches of the pot after they have ceased blooming for the season; the pots afterwards placed in a shaded situation out of doors, giving them very little water. Young

shoots will speedily appear all over the plant, and when these are about a couple of inches in length the plant should be taken out and the roots pruned, shaking away most of the old soil and repotting in as small sized pot as the roots will admit of. By this practice the plant will form a fresh set of roots, and allow of an additional supply of fresh soil, without using a pot disproportionally large as compared with the size of the plant, which would otherwise be the case were the plant constantly shifted into larger pots without any reduction of roots. They will not require much water for a time after this operation, and should be kept in the shade, bringing them into a more exposed situation as the roots strengthen. When brought into the house about the middle of October, they should be placed near the glass where fresh air can be admitted to them daily; they should receive a minimum supply of water during winter; indeed, they should merely be kept from wilting until February, when they may be removed into flowering pots. They should now be encouraged to grow by keeping them moist at root and occasionally syringed over the leaves; if the points are pinched out of the shoots, they will assume a compact bushy habit. They require a plentiful supply of water when in flower.—When the bloom fades, set them out of doors to harden and ripen the wood before cutting them down; if intended to flower another season, the same routine as above now commences. I never bloom the same plant oftener than two years, preferring young plants to old ones.

PROPAGATION.—Cuttings made and planted at the annual cutting down, will root readily at the back of a fence or other shaded place, and make fine flowering plants for next summer, if potted and kept growing gently all winter.

SEED, saved from the most approved sorts, should be sown as soon as ripe, not later than the first of August, to flower the plants the following summer; put them in five inch pots for flowering; keeping the roots somewhat contracted will induce them to flower sooner; both these and other plants will be much improved by applications of manure water *after* the flower buds are formed; if applied *before*, an increased wood growth and a diminished crop of flowers would result.

The Geranium does not force into bloom very well, but by cutting them down early and getting a good growth before winter, and keeping them in small sized pots the ordinary flowering period may be anticipated a few weeks. Some varieties naturally flower early; Alba multiflora and Washington I have had to flower fine in February, without much care; the former especially forms a fine truss, and flowers profusely at an early season.

I grow them in pure turfy loam, with the pots well drained, using no manure, except an occasional application in a liquid state when the flower buds are expanding.

The following are twelve of the best that I noticed this past season: Lyra, Blanche, Orion, Aspasia, Brilliant, Belle of the Village, Berangaria, Rollo, Refulgent, Magog, Cassandra, and Forget-me-not.

Baltimore, Nov. 1852. W. S.

The Management of Window Plants.

BY F. NORTON.

So much has been communicated through the medium of your widely circulated "Florist," on the proper treatment of plants in rooms that it might be supposed I was entering on a subject already exhausted. However, as the successful cultivation of such is attended with some difficulty, particularly to those who have not yet had an opportunity of becoming familiar with the requirements of such plants as they generally admire and endeavor to nurse, a few observations will not perhaps be considered superfluous. Every family of plants has some peculiarity in structure and habit, and therefore demands more or less special provision as to soil, water, or air—all require more or less variation in the general course of treatment. As to the situation in which they are placed, the room should be as light as possible, and airy; if dark and close, few plants can be expected to flourish in it. If on the contrary, plenty of light is afforded, as well as sufficient air and exposure to the sun's rays in winter, they may succeed as well as in an ordinary greenhouse. If they become unhealthy and begin to decline, the result may be generally attributed to one or more of the following causes—want of light and air, injudicious watering, want of suitable soil, or accumulation of filth on the leaves. The sufficient supply of light and air is perhaps the most essential point to be observed, if indeed we can make any difference in points so necessary to the health of the plant as all the above named are; however attentively the other conditions may be observed, want of pure air will generally frustrate our attempts at cultivation. The want of a sufficient supply of light will prevent the growth of a handsome plant, rendering it sickly and weak. Plants in rooms therefore should be placed as near the light as they can conveniently stand, and receive as much air as can be admitted without reducing the temperature too much. Water should be carefully and judiciously supplied, as its careless application does more injury to plants in rooms than is commonly imagined. To prevent the soil ever becoming baked, as is often the case with clayey soils when not carefully attended to, is a point of essential importance, as in that case the roots are bound up and destroyed by the compression of the particles. The best criterion is the appearance of the surface of the pot; some gardeners judge by the weight of it—this requires some practice, however. The surface of

the pot should never appear wet, unless immediately after the application of the water; it should not, on the other hand, appear quite dry, but in an intermediate state. This is the most important point for the attention of the amateur, the experienced gardener needs only to look at the surface of the soil to tell if the conditions are complied with to ensure its healthy state. This accuracy of observation of course is the result of practice, and can be attained by any who attend to the matter carefully. To prevent the soil having a dry appearance is a matter of importance with many, they therefore water continually at certain intervals; but in this course they commit a great error. The result is, that the soil becomes sodden and sour, and the roots perish.—Others, to avoid this evil which they have been guarded against, run into the opposite extreme—not affording sufficient moisture to preserve the life of the plant. If anything, however, seems to be the matter with the plant, a dose of water is the common remedy applied, with the utmost faith in its restorative powers. This is not to be wondered at, when it is remarked how soon a plant wilting for want of water will be invigorated by an abundant supply. But dosing a sickly plant with water, is like a physician crowding the stomach of his patient with medicines which even the strongest stomach could scarcely bear. This over-supply of water will manifest itself in the falling off of the leaves after their having turned yellow and sickly. Almost a similar result follows excessive drought, the leaves in the latter case, however, present a shrivelled appearance before their fall; the consequence in each case is the loss of the leaves, on which depend the health and existence of the plant. Excessive dryness is at once indicated by the flabby appearance of the leaves, and if not too long in this state may be restored in a few minutes by a copious supply of water. The residue of water which escapes from the pot should be poured out of the saucer, as the plant would absorb it again by capillary attraction.—The water used should always be of an equal temperature with the atmosphere in which the plant is growing, or nearly so, as excessively cold water chills the roots; it should be allowed to remain in the room for some time, or a little warm water added to it. An unclean state of the leaves of the plant may be caused either by insects, such as scale, thrip, mealy bugs, aphis, or green fly, red spider, &c., or by accumulated dust. Various methods are recommended for the removal of the former; scale may be removed by washing with soap suds, or by covering the leaves and stems affected with a thick coating of soap, which, when it dries, peels off, taking the scale with it; thrip is removed by a small brush; green fly, by enveloping the plant in fumes of tobacco smoke, by placing the plant in a bell glass and burning some tobacco in it, or by syringing with tobacco water, or by syringing the plant first, and then sprinkling it with snuff. The green fly

is by far the most common pest, and may be kept in check by heavy syringing from its first appearance on the plant. Red spider is only removed by cleanliness and frequent syringing; as it is the most minute, it is also the most troublesome enemy; its presence is indicated by yellow dots and a sickly appearance on the leaf. Dust may be removed by a sponge and clear water, and this should be carefully attended to, as the lungs of the plant become choked by it.

Potting in unsuitable soil, or the wearing out of the soil in the pot before its renewal, is another great defect in cultivating house plants. This is the most troublesome point to rectify, as few ladies care to work amongst "dirt," and besides it is not very conveniently procured in cities, and persons are often content to have their plants perish or decay, rather than put themselves to the trouble of procuring a portion of suitable soil from the florist who can always supply it.

With respect to the requisites of soil and potting, attention should be given to the character and habit of the plant; if its branches are loose and slender, its leaves small, its wood hard, &c., it will doubtless have small fibrous roots; these require hard potting in sandy loam or loam and peat. Ericas or Heaths which are extreme in this characteristic, require almost entirely peat, as well as many other families of a similar habit; peat has a tendency to preserve the roots from decay. Those whose wood is stronger and roots more robust, and leaves broader, require more loam in the soil, such as Acacias, Ardisia, Stenocarpus, Camellia, &c., &c. Those plants which are of a rapid growth, and furnished with soft broad systems of leaves, as Pelargoniums, Chrysanthemums, Heliotropes, Chinese Primrose, Fuchsias, Cinerarias, Calceolarias, &c., require more or less stimulating substances, as guano, leaf mould and other manures. This is also true of almost all bulbs, such as Hyacinths, &c. Sparaxis, Ixias, Gladiolus, &c. thrive well in a compost of rich sandy loam, without peat. Plants with vigorous roots and but slender heads, such as Veronica, Scutellaria, Ruellia, Maurandia, &c., require a light sandy soil with a portion of leaf mould and decomposed matter. In potting always place plenty of potsherds over the bottom of the pot, and afterwards the riddlings of the soil, to ensure good drainage.

Orchids, and such plants, are not of course included in these remarks, as few are grown in rooms, and many of them being epiphytal require peculiar treatment; some of the terrestrial species could be grown in rooms with moderate attention. The soil for such Orchids as Ophrys, Calopogon, and others, is equal parts light sandy loam and turfy peat, with a little leaf mould, well drained and sparingly watered, withholding it at their season of rest. Succulent plants of all kinds require very little water; many of these are well adapted for cultivation in rooms; the old practice was to use poor soil, as sandy

loam and lime rubbish; many now recommend strong loam. I do not believe in either extreme. Such plants as Aloe, Cacalias, Cotyledon Sempervivum, Mesembryanthemum, &c., all belong to this class, as well as the various kinds of Cactus, on which your readers are already well informed.

Some aquatic plants are easily cultivated in rooms, as the Egyptian Lily, (*Richardia Œthiopica*,) and do well in loam or loam and peat; they require copious supplies of water, and are most easily managed by placing the pot in a pan of water. Bulbs generally succeed well in rooms with less care than most other plants and require rich soil.

NATIVE PLANTS.

MR. EDITOR:—In continuing my remarks on what I think the too much neglected subject of native plants, I wish to speak of several classes of plants which are particularly interesting. Perhaps the most singular and beautiful is the Orchis tribe, of which there are many species immediately at hand. Orchis spectabile, the Aplectrum, Cymbidium, Habenaria, &c., are to be found in this and the neighboring counties, and plentifully in near parts of New Jersey. The Neottiæ are represented by Spiranthes and Goodyera, which are certainly worth cultivating, especially the latter: its leaves are as beautiful as those of any variegated plant we have: and the humble admirer of beautiful foliage who cannot spend guineas for an East India Neottia, can indulge without cost in Goodyera pubescens. The Cypripedia are without exception a beautiful genus. We have Cyp. acaule or humile growing near us in Jersey, and pubescens and perhaps parviflorum are to be found in Chester county. C. spectabile may be obtained on the mountains in Pennsylvania, but it is very hard to get; it is very highly valued in Europe as one of the most beautiful of Orchids; there are two other species indigenous to the United States, C. candidum and C. arietinum, the last variegated red and white, and beautiful beyond description. The Sarracenias are interesting and beautiful; S. purpurea is so common about here as sometimes to be sold in the market; yet it is as beautiful as the S. Drummondii of Florida, which at Chatsworth, the seat of the Duke of Devonshire, divided the attention of the visitors of the Victoria regia—here it is only the "pitcher plant."

The Drosera or Sundew is a very interesting genus, nearly allied to the Dionæa, or Venus flytrap of the south. D. rotundifolia, filiformis and longifolia are found within two or three miles of Philadelphia, and like the Sarracenias they can be cultivated in pots placed in saucers of water, though in Europe they cover them, as well as the Dionœa with bell glasses.

The native Ferns are of very great beauty—the various species of

Adiantum, Pteris, the Woodsias, Asplenium, Schizæa, &c. equal in beauty any collection of exotics we have ever seen: and we respectfully suggest to the schedule committee, to offer another medal for a collection of indigenous ferns.

As to pointing out localities where this or that plant may be found we say let every one find that out for himself; it is of great disadvantage to learners to have all the difficulties in their way smoothed for them; I recollect at school that the boy who had his Latin translated for him was always behind the one who used his dictionary: so the plant collector will remember better both the plant and the locality if he finds it himself, than if told to go to such a swamp and near such a tree he would find so and so: but if he is out herborising and finds plant after plant new to him, and happens on something rare, how much more will he value it. Besides this pointing out of localities has another bad effect—everybody goes after a rare plant, until it is entirely rooted out and the locality is a locality no longer. In England, Cypridedium calceolus is not to be found except in gardens, and not frequently in them; any person or persons who are fortunate enough to know its habitat, now grown wise, keeps it a profound secret. C. pubescens has been exterminated in this immediate neighborhood, and we believe that C. spectabile was found by Bartram in this county, (not country, as you made me say in my last letter.)

We hope to see the time when natural history will form an important branch of early education; in this respect we cannot but commend the educational institutions of the Society of Friends—Westtown school has turned out more lovers of nature by far than any other; and we well recollect the young "broad brims" from Haverford school prowling about the neighborhood with botany boxes and nets for butterflies.

In the last number of Hovey's Magazine was an account of a visit to a celebrated locality in Vermont. Why cannot some of your readers, among whom we know are several of the best native botanists, give you an account of the varieties found in this neighborhood, which is said to be almost the richest in the United States?

PHILARVENSIS.

MILDEW ON GRAPES.

One of the greatest pests that vine growers have to contend against is the mildew, which I have invariably found made its appearance among vines after a cold rain, with an easterly wind prevailing—(there is an old saying, "that the wind from the east is neither good for man or beast," nor I may add with truth, for vines either.)—It very rarely attacks these before July or August, which I attribute to the vines having by this time attained a vigorous growth, as they are

more susceptible of the sudden change of temperature to which we are subjected, and the weather for two months previous to this is generally bright and clear, the wind prevailing from the south-west, and less sudden changes of temperature. But in July and August we are subjected to violent thunder storms, succeeded by an easterly wind and rain, perhaps for several days, and when such is the case you may expect the mildew to appear, and the vines will require close inspection to detect it, for it is not often discovered till too late. On its first appearance a kind of transparent blotches are observeable on the leaves, of a rather lighter hue than the general colour of the leaf, which may be seen by a careful observer, but by a person taking a cursory glance at the vines it might not be noticed; and if not arrested in this stage, it will soon spread over the leaves and shoots as well as the fruit, before you are aware that the vines are at all attacked. I believe giving front air, injudiciously is another cause of mildew. I would only recommend ventilation at the top, and not too much there either, being guided by circumstances; in fact I am of opinion that vines in a cold house will do well without giving air by opening the sashes, if in glazing the house a small space was left between the laps of the glass, and the vines not trained too near the sashes. This is my theory of the causes, and if the above hints will be the means of bringing out the experience of others more competent than myself my end will be obtained. Some attribute the mildew to excess of moisture, others to want of air, and advocate free ventilation; but I think there is ample proof that want of air is not the cause, for any one may see that vines grown in the open air are always worse mildewed than those under glass, which I believe is the only cause why the foreign vine will not succeed in the open air. A vine that is badly attacked with the mildew loses its leaves long before the wood is ripe, consequently the functions of the vine are stopped, and the plant thereby rendered incapable of enduring the frost. It is said prevention is better than cure. The following treatment I have adopted in growing vines in pots which will apply to fruiting vines also.

After starting the vines in the spring at the usual time and in the manner which is needless for me to detail, I keep them growing as fast as possible, never suffering them to have a check by a sudden fall in the temperature of the house, keeping up a good heat in the day time and syringing freely, being always careful to watch the change of wind to the east, and put on a little fire, raising the temperature to admit of giving air for the escape of the evaporation from the flues. By this method I have succeeded in keeping the vines free from mildew; as for curing it when once introduced I believe it cannot be done. Sulphur dissolved in slacked lime and applied with a syringe

will arrest its progress, but it requires to be applied very carefully or it will kill the points of the shoots and the young leaves, particularly if the sun is out after syringing. I have seen vines completely scorched with it, and if you don't hurt the vines with it, the spots will turn brown and eventually dry up, giving the vines a very unhealthy appearance. Flower of sulphur dusted on the affected parts will also stop it for the time being, to be performed again on its next appearance When, however, the fruit attains a certain stage of maturity few persons are disposed to apply the sulphur, and for this reason care should be taken to have it exterminated before that advanced period of the operations. A high and dry temperature, with the use of sulphur, will be certain to check the mildew.

J. P.

THE CHRYSANTHEMUM.

Mr. Editor.—As the season of hardy flowers is nearly past, "the last rose of summer being faded and gone," and little left to adorn the flower border and greenhouse but this useful and highly ornamental plant, blooming as it does at a season when other flowers are scarce, and combining in the genus so many varied and beautiful colors; at the same time so freely that under very ordinary treatment it amply repays the cultivator. Yet although naturally a free bloomer it can be very much improved by cultivation; and my object in soliciting a small space in your pages, is to give some of your amateur friends a few useful hints relative to the pot culture of this plant, and also a slight description of some of the best and newest sorts.

To grow the Chrysanthemum well, the plants should be raised every season from cuttings or side shoots taken from the old plants about the end of April, planted in four inch pots in light sandy loam, put into a greenhouse or frame, with a slight shade from the sun until established, when the shading may be removed. When the plants have grown to the height of six or eight inches, top them, and if roots are forming round the sides of the pots, shift them into six inch pots, using a compost of turfy loam, well rotted manure and sand; plenty of air should be admitted at all times, and the plants kept free of each other, as they are apt to get drawn and lose their lower leaves if too much crowded. When roots are showing through this last shift, they may at once be put into their blooming pots, which should not be less than nine inches for Pompones, and twelve inches for tall growing sorts. The shoots require to be staked out to prevent their being broken, to keep the plant in shape, and admit light and air. A situation in the open air should now be chosen where the plants will be fully exposed to the sun and at the same time sheltered from high winds; plunge the

pots to the top, allowing the plants plenty of space to grow without being crowded. All that they now require is water when necessary, and liquid manure may be given occasionally, looking them over now and then to see that none of the shoots require tying up. On the approach of frost, put them into a greenhouse, or some other sheltered place where plenty of light and air can be given, and in a short time they will prove to the cultivator that his labor has not been expended in vain. He will have no plants eight feet high with a few green leaves at top, and here and there a solitary flower; but handsome, bushy plants, clothed with foliage to the pots and covered with such a profusion of flowers that he will scarcely recognise his old eight feet favorites in their transformed state.

The different sorts I intend to recommend are those that have come under my own notice, and are well worth the attention of every lover of this flower, many of the newly introduced sorts being very handsome in form, almost to be compared to the famed Ranunculus of the old world, and very little inferior in point of color. The following Pompones are deserving a place in every collection: *Bizarre*, primrose, yellow; *D'or*, golden yellow; *Saturn*, yellow, very compact; *Mignonette*, yellow, shaded with bronze, very dwarf; *Cybele*, bright yellow, slightly bronzed; *La Miniature*, orange yellow; *Compactum*, pure white; *Pompone*, white; *Lartay*, dark rose; *Renoncule*, pale rose, white centre; *Elegante*, rosy white; *Perfecta*, delicate rose, shaded with white; *Paquerette*, white, shaded with pink; *Horatius*, white, tinged with rose; *Henriette Chauviere*, white, tipped with pink; *Harriet Lebois*, carmine, white centre, very dwarf; *La Liliputienne*, buff and orange. Among tall sorts the following are first rate—*Temple of Solomon*, large yellow; *Annie Salter*, rich yellow; *Solon*, compact yellow; *Ne plus ultra*, white; *Marshal Ney*, orange and pink; *William Tell*, orange and buff; *Baron de Salamon*, lilac; *Mount Etna*, red and brown; *Grand Napoleon*, crimson; *Mrs. Cope*, deep red; *Vortigene*, dark crimson; *Emilie Therese*, yellow, tipped with red; *Rois des Cramoisies*, pure crimson; *Queen*, blush.

As many of our friends will not be disposed to make such a collection as the sorts named, although there are a great many in cultivation that I have not mentioned; yet from the varieties given they will be able to make a first rate selection, and by attending to the directions given, they will be able to adorn their greenhouse or parlor window when the merciless frost has laid low all the gems of the flower plots; for when all is desolate without, their delicate flowers will speak of a coming spring, and will form a fitting subject for those who can admire the beautiful in nature.

"HORTICOLA."

Give not thy tongue too great liberty, lest it take thee prisoner.

MODEL FARMS.

What a vast amount of matter has been written, from time to time, on the fertile topic of the cultivation of the soil! Whole volumes issue annually from the legislative departments in all countries where civilization is acknowledged to have reached; and every little country newspaper has its column for farmers, of paramount importance to the readers thereof. Can we admit that the amount of benefit accruing to the community of agriculturists is commensurate with the pains taken or money expended in thus spreading agricultural knowledge? Can we rest satisfied that a fair proportion read, and benefit by what is written for them? That when they read, they can comprehend—that comprehending, they practise the improvements proposed, thus profiting decidedly in the end? I fear that we cannot arrive at this conclusion, for if the earnest recommendations of the friends to improvement were attended to, even in a reasonable degree, we would not now witness those defective systems of husbandry that in the face of so many other improvements astonish the inhabitants of other countries who visit us. One thing is clear, that immense quantities of grain is produced by American farmers; that fine cattle are fatted and made available to the consumer; that the farmers themselves are an independent and energetic class, the firmest friends to our republican institutions. But then when we calculate that the soil of America is yet comparatively a virgin soil; that as yet the population is by no means dense—that land is abundant, and its tenure certain and secure; then comparing our advantages with the position of agriculturists in older nations, we must admit that our burthens are lighter, our opportunities vastly superior to theirs. Manual labor alone is not in our favor, as a great difficulty in American farming is the high price of labor. Even here we are not to be beaten, for the genius of the American mechanic comes to the aid of the farmer with his machinery.

We would gladly see a system of agricultural training introduced to this country which would impress upon the mind of the agricultural youths of the country the propriety of certain improved systems which both in theory and practice have stood the test of years. Improvements based on scientific knowledge and the truths of science; systems in accordance with natural laws and the principles of political economy. It is only within the last fifteen or twenty years that the principles and practice of thorough draining has been clearly understood and practised in Europe, a great reformation having taken place in this matter by the introduction of a comparatively new system, by Smith, of Deanston, in Scotland. This was accompanied by sub soil ploughing, and for a time the whole agricultural community of Great Britain was agitated by this man's innovation. But Smith of Dean-

ston proved the correctness of his principle, and many farmers have since proved it in practice. It was no small matter to cut up whole acres and run drains to the depth of three and a half feet at intervals of fifteen ft. across the field, running these into a main drain perhaps four or four and a half feet deep. Yet great as was the expenditure, thousands of acres have thus been drained during the last ten years, as without this thorough draining all other subsequent improvements are in a great measure lost. We do not say that it would be necessary thus to thorough drain the lands of America, where the rapid approach of the scorching summer follows so closely on spring as to evaporate the pools of water that we have waded through in the furrows of some of our Philadelphia county arable fields in the month of March, not a drop of which remains in the latter part of April or May, when the farmer comes round to prepare for the crop. We do not say any good farmer would suffer his fields to lie thus deluged with water, the evaporation of which renders the soil unfit for the necessary operations, and the continual flowing of which water to the surface to be continually evaporated, reduces the natural temperature of the soil many degrees, as well as renders it tenacious and difficult of pulverisation or reduction to a proper tilth. Thorough draining would not hurt many fields in Pennsylvania, even those fields which during the droughts of summer appear never to have received a shower of refreshing rain; but dig deep, and we are much disappointed if water will not accumulate, and that, too, at a less depth than that to what well-sinkers generally descend. We should like to see the system of thorough draining well and practically explained to farmers—which can only be done by actual experiment—not beginning in the middle of the subject, but at the fundamental principles which regulate the matter, elucidating the laws of hydrostatics in relation to the soil. Then the rotation of crops is a topic of immense importance; how necessary is it to the proper cultivation of the farm, and how satisfactory to understand clearly the causes on which depends the fact, that a rotation of crops is of the first importance in husbandry. Manures, their character, composition and application, would still bear much elucidation, as may be observed by the discussions still carried on about the proper *functions of lime*, still held by many to be a manure; *the ploughing in of green crops*, invariably in preference to other more concentrated substances possessing nearly the same properties, and far more cheaply and conveniently procured; these discussions show that there is room for well conducted experiments and practical information of a reliable character. We have still much to learn as to the treatment of farm animals, the improvement of the breeds of cattle, the arrangements for housing, feeding, and pasturing, which are still deficient.

And of still greater importance and receiving less attention, is the

accumulation and preparation of farm yard manure. It is true, we can purchase guano, bone dust, poudrette, super-phosphate of lime, &c., all good and useful; but there is continually wasting and running to loss as good a fertilizer as any of these—the deluging showers carry with them the rich washings of our cattle yards. No provision is made, in many instances, for its preservation; no tank is cut, no site or bed is marked out for the deposite of the refuse as it accumulates. We have seen much attention given to this matter, and it repays the farmer for all the care bestowed; when the white fumes of ammonia have commenced to ascend, we have seen immediate steps taken to cover it with a layer of fresh material of an absorbing nature; we have always seen the careful farmer deposit a layer of fresh mould or peat over the bottom of the site for his manure heap, to absorb the gases and liquids descending or coming in contact therewith, and the composition of all this matter and its action on the soils and crops explained and proved. The composition of soils also receives attention at a well managed model farm, intended to improve and instruct the youth who are to become our next generation of food producers. Practical lectures are given on all topics intimately connected with Agriculture, and then actual practice in the field follows—and all this is a profitable investment of capital. Such a well managed model farm is not only self-supporting, but in the end remunerating. Other less noble governments have their model farms—America, we hope, will soon add them to her list of free and progressive educational institutions.

Foreign Trees in Landscape Gardening.

BY THOMAS MEEHAN.

The following remarks were written some time ago and intended for the "Horticulturist," as they were the result of the perusal of the article on "Rural taste and its Mission." Since then the subject has been referred to in your pages, and the Horticultural Editor of the Genessee Farmer has observed that the subject has commanded all at once unusual attention—no doubt because many persons disapprove of treating the subject in a narrow or limited sense. It is hoped the following observations will tend to place the matter on a better footing.

A landscape is the appearance which any portion of the earth presents in combination. Water, land, trees, or anything that varies the surface of the earth, cannot properly be considered as forming a landscape, unless they are more or less taken together. A landscape is pleasing, when the parts which severally compose it are arranged in accordance with well known principles, which always or generally elicit admiration. When the arrangement of these parts are in op-

position to the principles which we admire, we pronounce the landscape wanting in beauty.

Landscape gardening is the art of forming a landscape. The duties of a landscape gardener vary according to circumstances. Frequently he has to bring together all his materials—has to throw up his hills, form his vallies, introduce his lakes, bring in his rocks, plant his large trees, and arrange them all together. At other times he has but to give as it were a slight finishing touch to nature's own sketch, and the result is perfection. We cannot then inquire whether he has "*followed nature*" in his operations, because nature often produces very indifferent landscapes. We have to ask, have the acknowledged principles of beauty and taste been respected? and is the result such as to command admiration from its harmony with these principles, and its fitness to produce the most varied, extensive, and lasting feelings of pleasure? This narrows the field of inquiry to a perceptible limit. We have to observe what are the principles of beauty, what are the essentials of good taste, and what the foundations of the most permanent feelings of pleasure which a landscape is capable of affording.

Amongst the many sources of pleasure to the human mind *rarity* stands pre-eminent. It is probably one of the usual attendants of beauty. Were all the daughters of Eve moulded to the form and attributes of the Marchioness of Douro, it is probable that Addison's ideal beauty with a large lump under her chin, would really be esteemed perfection. If rarity has no connection essentially with beauty, it certainly lends it an additional charm; and, if no pure principle of taste be violated, that landscape will be most admired which contains the fewest of every day scenes. Trees generally form the most interesting portion of a landscape. If their form, color, habits, and general appearance are beautiful, and their connection with surrounding objects expressive and appropriate, they aid to form a beautiful landscape; and, if to all these they are of a kind rarely to be met with, the landscape, beautiful as it would otherwise be, possesses a higher interest. It is difficult to understand the objections to the employment of "foreign" trees in landscape gardening, though amongst the objectors are many men of the highest standing in the profession. The writer of the otherwise beautiful paper on "Rural taste and its Mission," in the October Horticulturist, complains that "we strive to fill our parks with something rare and imported, instead of adorning them with the equally beautiful products of our own soil. The rivalry in importing foreign plants, fruits, and flowers is too nearly akin to the pedantry of those *excessively travelled* gentlemen, who assume *foreign airs* to the no small detriment of American independence." If the meaning of the writer be clearly expressed, does not the argument prove forceless? In landscape gar-

dening we employ *art* to produce a pleasingly *natural* effect. Because the world of mankind, to suit its own fancies or necessities, divides the earth into kingdoms and countries, and pronounces all beyond the boundaries of any given section *foreign ;* it does not follow that the world of nature must do the same. If we are to object to some plants as being "foreigners," let us understand the nature of our objection. "Our country" is a pretty "big" word. From the St. Lawrence to the Rio Grande, the Atlantic to the Pacific—and even then *when* are we to stop. A plant to day a "foreigner," may be a native to-morrow. Should Mexico, Canada, or Cuba become annexed, we shall have a few thousand more flocking to the office of some botanical notary for their "naturalization papers." Flora laughs at the idea—in her code of laws, judged by a jury of humanity, the noble old Taxodium in Bartram's Garden is as much a "foreigner" there, as the Platanus orientalis whose branches are intertwined with it. In our flower garden we cannot see that the white Vinca of Madagascar, or the Plumbago Larpentæ of China, can practically be considered less foreigners than the Escholtzia crocea or Eupatorium cælestinum from States of our own esteemed Union. The fact is, all plants are "foreigners" when not growing in their native localities.

What plants or trees are to be used in landscape gardening, does not nor ought not, to be made a question of national partiality. If any given tree possesses any property which any given American tree does not possess, while at the same time it has every property of the other with that peculiar one of its own, it ought to have the preference.—What is as well adapted for planting on the top of an elevated piece of ground, as the Norway Spruce, if that piece of ground happen to be appropriate to the surrounding scenery? Its erect, heaven-aspiring top, darting upwards as if in proud contempt of the hill's height on which it grows, while the half-ascending yet pendulous branches as if half-wishing, yet fearing to follow their leader to the dizzy height to which he aspires, seem to embrace the ground beneath them. The Hemlock Spruce is the only "native" approaching this in such cases ; and those who have seen large specimens of each side by side can only appreciate the superior beauty of the former.

There are often many properties which the so-called foreign trees possess which can be found in no others, thus rendering them in some cases indispensable. As the dark, sombre evergreen is the associate of our ideas of winter, so the light, airy, sprightly habits of deciduous trees are of the joyous freshness of summer. It is a very desirable point in all gardens which are connected with a summer residence, that the deciduous trees they may contain are, many of them, of those kinds which retain their leaves to a late period of the autumn. The British Oak, carrying with it that impregnable pride which in its own

country and on its own waters some poets have given it, is the last of all oaks to surrender its freshness to an American frost. I have seen it full of green leaves two weeks after the willow-leaved, the latest of our oaks, had given up every leaf to the enemy. The Elæagnus angustifolius will retain its willow-like foliage nearly the whole winter, so that at Christmas one unused to its "American" appearance, would deem it an evergreen. The Hippophae rhamnoides has, in a great measure, this characteristic also. The Rhamnus catharticus is green to the "last," as also is Paliurus aculeatus. When in their spring advancing habits, the Horse Chestnut by its earliness, and the English Buttonwood by its lateness, give a high interest to a landscape. The late Mr. Downing observed, that the latter was exempt from the disease which renders the American variety so obnoxious in many situations. He was led to believe the cause of the disease to lie with spring frosts. This is confirmed by the fact of the American buttonwood budding forth from a week to ten days earlier than the other. Whether this be the reason or not, the disease has given the English variety a position in landscape gardening which no other tree can fill so well.

The landscape gardener then can know no difference in his operations between "native" and "foreign" in his materials—he has ideas to *express;* whatever expresses these ideas most suitably he must use—and a "foreign" or rare plant will often become indispensable, while its very rarity will give it an additional charm, which in every circumstance is sure to please.

RETROSPECTIVE CRITICISM.

Progress of American Horticulture.—Judging from what we see around us, the number of new places springing up, and the increased horticultural structures in those already established, the number of horticultural societies and the addition to the horticultural press, we may say that American Horticulture *is* progressing, and very rapidly. As we heard it predicted a few days since—in a few years we shall be up with, if not ahead of, England in gardening, as we are so energetic in every thing we do. Certainly, comparatively speaking, we are now before the English, for in proportion to the time and wealth, we have done more than they. More actual attention is paid by amateurs here to their gardens than there, for they have these places for their own amusement, and because they take an interest in them; while in the old country a gentleman or nobleman has conservatories because his place would not be complete without them. He gives orders to his steward to hire him a gardener, who gets up houses and vineries; when they are finished and supplied with plants, the family walk in, perhaps once a day, admire, and walk out. This causes much difficulty

with foreign gardeners here, as being used to this system they cannot (in some instances) bear with what they call interference, but which should be considered as encouragement, on the part of their masters.

As to the *Glazing*, we have seen and examined it, and as far as we can judge, it will answer admirably; we know of two places, one near here and one in Connecticut, where it has succeeded. One way in which horticulture may be best encouraged is, in discriminating and liberal awards for new plants, fine specimens, &c., by our Societies. We would like to see, not bronze or silver medals, but several gold medals awarded for collections; and let these be convertible into cash if the gardener should prefer it; though we do think, or we would like to think, that gardeners generally would prefer the medals—still some of them need the money more. We would propose that among the gentlemen of ample means who are members of the Society, a fund, say of $1000, should be raised, the interest of which would provide one or two gold medals to be awarded each year for some special object.

Agricultural Education.—So much has lately been said on this subject, that it is to be hoped that something will come of it. The way in which this instruction is to be had, whether by government schools or by private institutions, is a disputed question; but so as our farmers do become educated, it matters little how it is done.

Native Orchids.—We are glad to see this subject agitated; so much may be done for science by a proper attention to the growth of indigenous plants of all kinds: not to speak of the added beauty to our collections by the introduction of so many homely novelties—for they would be novelties to nine-tenths of the horticultural public. The details furnished in the article of Dr. Lindley are very interesting and instructive, not only in the collection of Orchids, but in their preservation in borders or in pots. We hope to see an interest awakened in these plants which may lead to an extended cultivation of them.

The Gloxinia.—We have in this neighborhood some fine collections of this handsome genus; but we do not see them well shown at the exhibitions—certainly, we have not seen such fine plants (with one exception) shown, as we have seen in amateur's houses. The schedule may be defective on this score, or the premiums not offered at the proper season. Some of the best varieties we have seen among the new ones are *Napoleon*, *Grand Duchesse*, *Iteline*, *Queen Victoria*, *Marie Van Houtte*, *Lady Mary Cecil*, and others.

Bartram and Templeton—Instances, both of them, in some degree, of unappreciated merit, at least in their own time; and, in Bartram's case, in his own country—but their reputation extends now over the scientific world. The study of natural science has its own reward;

reputation is a very small part of the pleasure derived from study of the inexhaustible field of nature.

Management of Orchids.—Why haven't we more of this beautiful family in cultivation? To be sure they are, some of them, very expensive; but for a few hundred dollars a very fine collection might be had, which might be continually added to; and we know that Cattleyas, Maxillarias, and some others, may easily be obtained from South America. We do not often see more than one or two exhibited at a time here; still there are some very fine specimens in our houses, and some which are probably only kept because they are Orchids, such as some Oncidiums, Epidendrums, &c. I think that if amateurs would confine themselves to a much smaller number than those proposed by Mr. Meehan, it would be well enough at present. Lycaste Skinnerii, and several Cattleyas, as crispa, labiata, fimbriata, Mossiæ, some Dendrobiums which are very free blooming, and Stanhopeas and Gongōras for fragrance would make a beautiful show. We lately had the pleasure of seeing in bloom at Mr. Dundas' a plant of Peristeria, the Holy Ghost plant of the Spaniards, the column of which resembles very closely a dove brooding over her nest.

Foreign Horticultural Establishments.—Loddiges' nursery comes very *apropos* after the Orchids, as from his place has emanated so many fine ones; his name is perhaps lost to the horticultural world, but the greater part of his collection will be preserved at Sydenham under the care of the great Paxton. Hugh Low & Co., are almost as well-known in this country as Buist, or Parsons, or Hogg, and we hope still to hear of many of his plants in this country. The others are also well known to the readers of horticultural books and papers—but does any one, even on this side of the Atlantic, dare to attack the great Dr. Lindley, the Lion of Botanical science and of Horticulture? Yet perhaps he is as open to attack as any lesser mortal—especially in his attempt to anglicise botanical names, which, if his own paper be any criterion, won't work in all cases: for instance, in his reports of the London Hort. Society's exhibitions we read "Mr. Franklin, gr. to Mrs. Laurence, exhibited Vanda teres, Lycaste Skinnerii, Cattleya Mossiœ superba, and the *Dalhousie Dendrobe*;" I don't think that I ever saw the translation carried out in a single instance; it is certainly an affectation which will die out in time. But the learned doctor seems to be objectionable on other accounts; he certainly does ride rough shod over the heads of the poor gardeners, and all who presume to question his sway. He is like many other persons in office, they "wax fat, and kick;" but generally speaking, they lose entirely the respect of all who come within their sphere. What "Anthophilus" has to say about gardeners is remarkably true; some of the specimens we

receive from the old country are so content with having been at a great place at home, that they are willing to rest their reputation entirely on that fact, without exerting themselves to do anything here; and for instruction, it has often surprised us that any gardener should neglect perfecting his education as much as possible, since so much is gained by it in his profession. We hope that "Anthophilus" will favor your readers with more of his remarks on these subjects, as gardeners and amateurs need stirring up occasionally; and the advantage is great when it can be done by one evidently so enthusiastic and so cosmopolitan.

Mr. Buist's account of the hardiness in England of such beautiful shrubs as Mitraria and Escallonia, makes one sigh for a more genial climate; but we are already too hot almost for Heaths and some other such plants—we cannot enjoy each extreme of plant growing, unless we could manage cold-houses to *summer* our plants in.

Green Crops.—It is being discussed now in the English papers, whether roots grow after the leaves are cut off; and it seems from the experience of many persons that such is the fact. And it is certainly a most useful fact, for if the outside leaves of turnips for instance, can be taken off and fed to cattle, without diminishing the yield of roots, how much more is obtained from the ground. In the matter of liquid manures ot all kinds, peat charcoal is coming into great use as a means of distributing them; but we suppose Mr. Connor will tell us all about it in his chapter on manures.

Calendar.—When we look at the fact that the best Grapes of Europe grow on gravelly hills it is surprising that any persons should persist in reiterating that the grape prefers strong manures, especially put on in such a wholesale way as some think necessary. But scientific grape growing, as well as scientific growing and doing of everything else, is pushing aside the old methods, and we now must have *reasons* for what we do. The potato rot is a witness against gross feeding; the poor tuber was fed and crammed with all sorts of overnourishment until it got the dropsy, and then a cure is attempted by giving it more excitement instead of diet and tonics.

The person who desires a remedy for the mealy bug, red spider and thrip, which will operate without killing the plant, will be worthy of a great reward. The mealy bug seems to be the hardest to reach, buried almost in the joints of the young shoots, he is out of the way of everything but a sharp stick or the point of a knife; and then it is vexatious to see coming out from where you killed him, dozens of young ones. We intend to try the sulphur and lime water, and will report our experience.

INTRODUCTION OF THE FUCHSIA.

Old Lee, a nurseryman and gardener near London, well known fifty or sixty years ago, was one day showing his variegated treasures to a friend, who suddenly turned to him, and declared: —

"Well, you have not a prettier flower in your collection, than I saw this morning at Wapping"—"No! and pray what was this phœnix like?"—"why, the plant was elegant, and the flowers hung in rows like tassels from the pendant branches; their colour was the richest crimson; in the centre a fold of deep purple," and so forth.

Particular directions being demanded and given, Mr. Lee posted off to Wapping, where he at once perceived that the plant was new in this portion of the world. He saw and admired. Entering the house he said,—"My good woman, this is a nice plant, I should like to buy it." "I could not sell it for money, for it was brought me from the West Indies by my husband, who has now left again, and I must keep it for his sake."—"But I must have it."—"No, sir!"—"Here," emptying his pocket, "here are gold, silver, copper;" —(his stock was something more than eight guineas)—"well-a-day! but this is a power of money, sure and sure."—"Tis yours, and the plant is mine; and, my good dame, you shall have one of the first young ones I rear, to keep for your husband's sake."—"Alack, alack,!"—"You shall, I say, by Jove!"

A coach was called, in which was safely deposited our florist and his seemingly dear purchase. His first work was to pull off and utterly destroy every vestige of blossom and blossom bud; it was divided into cuttings, which were forced in bark beds, and hot beds; were re-divided and sub-divided. Every effort was used to multiply the plant. By the commencement of the next flowering season, Mr. Lee was the delighted possessor of 300 Fuchsia plants, all giving promise of blossom. The two which opened first, were removed into his show house. A lady came:—

"Why, Mr. Lee, my dear Mr. Lee, where did you get this charming flower?"—"Hem! 'tis a new thing, my lady—pretty, is it not?"—"Pretty! 'tis lovely. Its price?"—"A guinea—thank your ladyship;" and one of the two plants stood proudly in her ladyship's boudoir.

"My dear Charlotte, where did you get?" &c., &c.—"Oh! 'tis a new thing; I saw it at old Lee's; pretty, is it not?"—"Pretty! 'tis beautiful!—Its price?"—A guinea: there was another left.

The visitor's horses smoked off to the suburb; a third flowering plant stood on the spot whence the first had been taken. The second guinea was paid, and the second Fuchsia adorned the drawing room of her second ladyship. The scene was repeated as new comers saw, and were attracted by the beauty of the plant. New chariots flew to

the gates of old Lee's nursery ground. Two Fuchsias, young, graceful, and bursting into healthy flower, were constantly seen on the same spot in his repository. He neglected not to gladden the faithful sailor's wife by the promised gift; but ere the flower season closed, 300 golden guineas chinked in his purse, the produce of the single shrub of the widow of Wapping; the reward of the taste, decision, skill, and perseverance of old Mr. Lee.—*Shepherd.*

The Florist and Horticultural Journal.

Philadelphia, January, 1853.

The facility with which experienced gardeners can be procured by those interested in horticulture and possessing the means of gratifying their taste for the beautiful in nature, has much to do with the progress of the art. A gentleman may have good taste, correct ideas of what he would desire in the horticultural department of his establishment; he may possess much accurate botanical knowledge with a just conception of what constitutes a landscape, but the details he does not feel disposed to attend to; other matters demand his attention, and he desires to delegate a portion of this business to another, whose sphere it is to be informed on all the practical concerns necessary to carry out the object in view—the formation of a garden and its accompaniments. This is the duty of the gardener; but how various are the qualifications, how different the degress of competency, how diverse the sort of information possessed by the different individuals who designate themselves by the appellation of gardener! The branches into which their duty divides itself are no less various in their character, nor less numerous. They comprise operations quite dissimilar; include the most delicate as well as the most rude extremes in manual labor—from the inserting of a minute bud, which is the rudiment of a future tree, to the uprooting of the giant of the forest when it presents an impediment to the carrying out of a favorite design—from the hybridisation of a flower, to the removal of a hill which happens to have been pitched by nature in an awkward position for the perfection of the landscape according to a peculiar plan. Vicissitudes of temperature have to be endured, varying from 32°, which is at least the highest temperature of the ice house in summer, to 100° or upwards, the temperature to which the vinery often reaches at that season. The enthusiastic gardener forgets all these difficulties when truly interested in his profession, and values the safety of his tender plants and the success of his crops, above all personal considerations. Inured to these changes of climate and accustomed to manual labor, he exposes himself to the severity of the seasons and adapts himself to the require-

ments of his social position; but in order properly to fulfil the duties he undertakes, he must be, to a certain extent, educated. He forms a poor assistant to the improving employer if he cannot appreciate his ideas and suggestions, as to the elements of beauty in the arrangement of the garden, park or conservatory. If he cannot converse with him at times upon the current topics of horticulture at home and abroad, and enumerate some of the improved systems proposed in the different departments of his business—if the common plants which spring up around him are unknown to him in a botanical point of view, and their position in the great scale of organised beings not ascertained or considered—if he only works without thinking or reflecting—if he carries on his operations without study or enquiry into the causes which regulate them, then he is but a poor apology for a horticulturist, and not in reality a gardener.

The amateur desires to call to his aid an individual who possesses a knowledge of the peculiar business which he professes; not a man who can dig and lop, and bury a tree here, and root up another there—but a man with a fair amount of muscular strength, possessing an intelligent mind, cultivated to a certain extent. He wants to learn from him what he should do to gratify a certain taste, and how to do it in the most appropriate and least expensive manner. How necessary it is then, that the gardener, whose advice the employer seeks in the proposed outlay of a large sum of money, should be informed accurately on the questions within his province. More than this—he should be obliging, and patient in the various difficulties connected with the determination of points of difference between himself and his employer, adapting himself as much as possible to the circumstances in which he is placed, and making allowance for the different tastes of different individuals. A gardener, in fact, to afford satisfaction to an amateur interested in horticulture, must be a man of intelligence, of general information, and agreeable in his manners. Brought in contact frequently with persons of refined taste, his address must be such as not to disgust them. We are led to make these remarks by the frequent difficulties that arise in the selection of gardeners; much trouble is caused by the want of a proper understanding of the duties of a gardener; much also by the difference that is observable between the arrangements in this country with respect to them, and those prevailing in Europe. All admit that we are dependent on foreign countries for our gardeners; we are, because there, the art and science of horticulture has reached its climax. There, nothing is wanting in the extensive horticultural establishments that is requisite to prepare the gardener, who undergoes a proper training, for assuming the charge of any similar concern; and thus, by attention to the principles on which the different operations are based, nothing is necessary on a gardener's

arrival in this country from Europe but to make himself acquainted with the differences of climate, the nature of the arrangements carried out in this country, (at present very different from what he has been accustomed to,) the plants most commonly cultivated and best adapted to the climate, and to the wants of the horticultural public; and then to try and make himself familiar with the spirit of the free institutions, which has no small share in the future happiness of the native of a foreign land. It will not serve any good purpose to indulge in odious comparisons of the establishments met with here, and in the country he has just left; this only tends to discourage those who place confidence in the statements made of the superiority of foreign establishments, but far oftener to create a feeling of contempt and opposition in the minds of those who are strongly prejudiced in favor of the character of their own institutions. And after all, there is so much to admire here—so much luxuriance of climate, and abundance of the gifts of nature—so much fine fruit, and no scarcity of fragrant flowers—so much freedom to admire, and enjoy, and participate in these, that in the end we think the superiority is not worth contending for. The amateur here enjoys his neat little greenhouse because he has watched its construction, collected with care and at a cost the plants it contains; he has tended the plants daily, and watched with anxiety for the opening of the bud of some great novelty—and is he not more gratified than the aristocratic individual who expends thousands of pounds annually on a conservatory and is ignorant of its contents, not knowing, perhaps, a Brownea from a Rose or a Rhododendron? We prize the spirit of our amateurs, and we would rejoice to know that when they employ gardeners they meet with men disposed to appreciate their love of a profession which they have chosen, we trust, for its own sake. We hope a better understanding will soon prevail between amateurs and gardeners. Every disposition is exhibited here for the advancement of gardeners and gardening; all cannot be effected at once. Horticultural societies are after all the great means of rendering them familiar with each other, and these, we are glad to find, are increasing in number.

Again we must reiterate our conviction that the great desideratum is a Public Garden, Botanical or Horticultural, where the intelligent gardener, when he arrives in this country, could in a few months be made acquainted with all its peculiarities of climate and plants, and be trained by able and experienced men in those branches which no intelligent gardener will deny are new to him, if he has been brought up in the gardens of Europe. But more than this: those men's abilities could thus be tested who professed acquaintance with a difficult profession whose first principles were unknown to them. Then at length the amateur could provide himself with a suitable gardener, and

the youth of this country, whose tastes were directed to the rural arts, could find a suitable institution where they might learn a beautiful and pleasant, if not a very remunerating occupation. We hope to see many of our youth chose this line of life, as by that means the business would begin to be recognised as an honorable mode of procuring a livelihood, and rank with others in the scale of respectability, if not in the amount of emolument.

The New Year is approaching, and with it comes a new schedule (at least we hope it will be new) of premiums in our Horticultural Society. We suppose that every one directly interested in horticulture, that is, every one who grows plants, fruits, or vegetables, could suggest some alteration, or what they think improvement in this matter. There are, of course, as many opinions on this subject as there are such persons; and we hope that when the schedule is offered, the premiums will be well debated—and in this way more persons will be satisfied. We propose to say a few words on the matter, giving them for what they are worth: as we are not of those who think their opinions absolutely right, and who wish to cram them down the throats of every one else. We know that there are many older and wiser heads than our own at work; to such we listen with deference. A person who proposes reforms, or objects to what is already established, is generally looked upon with suspicion; but conservatism in scientific matters, especailly in so rapidly advancing a science as horticulture, is not to be thought of: old fogyism is no longer respectable.

Beginning with the stated monthly exhibitions—the principal competition is in the way of "the best collection of plants," without designating number or kind, whether greenhouse or hothouse, or hardy; whether for superior growth or rarity. As this is an especial cause of disappointment and complaint, the limits could not be too well defined. We would say, limit the number to twelve or twenty specimens, not exceeding the latter number; let the growth be the first criterion, as exhibiting the skill of the gardener; if equally well grown, then the value of the collection—but in this the judges may err in preferring well grown Pelargoniums to other plants not so well looking, of more difficult kinds, as Heaths, and such plants which are usually thought more intractable. As to the number, we have seen such crowds of plants, sometimes mere *trash*, shown for competition, that the sooner they are limited the better. The plants which obtain the gold medals at the Chiswick shows are not always of the rarest kinds, but they are specimen plants, such as Allamanda cathartica and Schottii, Pimelia spectabilis, Epacris grandiflora, but of a size and compactness that those of us who have not seen them have little idea of, and always in splendid bloom. If we mistake not, Pelargoniums, and such plants as are specialities, are excluded from collections.

Again, in the designs—we would think that they should be preferred for gracefulness, for appropriateness, and for the rarity of the flowers which compose them. A large pyramid of coarse flowers makes a showy object sometimes, but there is no real beauty or value in it; a basket, is generally, we think, a much handsomer and more tasteful object. There is a premium offered for this, and for a hand bouquet; both of these are useful. Whether baskets and bouquets of indigenous plants promote the study of native botany, is a question. The collection of named indigenous plants in pots we consider a most interesting and important one; but the judges must know enough of native botany to be able to distinguish the rarest collection. Twenty plants might easily be shown in pots here, which, if shown in London, would receive a Banksian medal.

The committee for awarding these premiums have no easy task—they will generally be censured for something by some body; but if composed of men of taste, who are acquainted with plants, and who are thoroughly posted up, they cannot err very far. No judgment should be made without their being able to give a reason for it, for judges of all kinds are in a measure responsible to public opinion, and the reputation of the society depends in a great measure on their capability. It is an acknowledged difficulty in all societies, to procure persons willing to act as judges who are capable, and yet entirely disinterested; amateurs of sufficient knowledge generally are exhibitors themselves, and nurserymen are interested in the success perhaps of a certain plant, or kind of plants; but difficulties can be overcome, and we have no doubt will be in these cases as well as in others. That the judges could carry out the rule of making awards before the Hall is crowded with visitors, we believe entirely practicable; if the hour is too early, keep the visitors out another half hour.

We shall return again to this subject, and take up other parts of the schedule; meanwhile we invite communications from any one who has any ideas to offer, as we would like to see the matter well discussed.

Winter is upon us, and in a few weeks even the few roses which are left in our gardens, and the useful Chrysanthemum, will cease to enliven the scene. The forest trees have been bare of leaves for a month past, and how dreary and desolate will those places, which are destitute of evergreens, appear! In some neighborhoods, there are cedars enough of the common kind to take away from the entire bareness of the scene. This is observable in the districts to the westward of the city, in West Philadelphia, and on the western bank of the Schuylkill, above Fairmount.

But in the absence of evergreen trees, it should be the business of the gardener, or the person under whose care the place is, to keep the grounds in the very neatest order; if they cannot be ornamental, let them be as little shabby as possible. Too many persons make winter the excuse for all sorts of litter and uncleanliness, saying to themselves always, "it's of no use now; when spring comes, I will clean up."—But how much would be added to the winter appearance of your place, if all dried leaves were gathered up and put away in an out-of-the-way corner, along with the remains of herbaceous plants and such other vegetable matter as will enrich your compost heap. Have your roses neatly tied up and covered with straw—they make cones which are at least pleasing from their regularity, and when covered with snow quite pretty ones; sweep the grass off as cleanly as possible, so that the melting snow disclose charming spikes of green, in place of, as is often the case, a piece of brick, or a block, or an old watering-pot. Gather up all the stakes which are left in the flower borders, and put the best of them carefully away for another year By a few days' labor you may thus have a yard which will be pleasant to look upon, and which will make much abused winter not half so disagreeable as some people assert it to be. Above all, let no one disturb the few birds which are about the place during the cold weather; snow birds are always plenty, and it is always pleasant to see them shaking the snow from the dead branches in their happy gambols.

It would appear, from the following advertisement, which we take from the "Gardener's Chronicle," that gardeners are plenty in England:

"WANTED, A GARDENER.—A clergyman wants a sober, industrious man, who understands greenhouse and the usual garden work. He must be able to milk a cow, and to make himself generally useful, as no other man is kept regularly. He must also be able to teach, and lead a band, and to sing in church. A young man of obliging disposition and good character will find a comfortable and constant place, and his wages increased; but they will be but moderate at first. Address, post paid" &c.

A course of lectures on Botany has commenced at the Hall of the Franklin Institute, by Dr. A. L. Kennedy, on Monday evenings. The second lecture of the course embraced the formation of the cells of plants. The lecturer explained the manner in which cells multiplied themselves, their various forms and functions, the great force they were capable of exerting in their formation, illustrated by the undulated surface of our footways; and afterwards illustrated by experiments the nature of vegetable fibre as compared with animal.

NEW PLANTS.

Chrysanthemum Hendersonii. This new pompone variety was shown for the first time in London, on the 16th of October, and a cut bloom of it was in a stand of Chrysanthemums shown at the Pennsylvania Horticultural Society's stated meeting, on the 16th of Nov. It is a yellow of good form, a free bloomer, and has the merit of blooming earlier by a month than the other varieties.

Rhodoleia Championii. We saw a specimen of this very rare plant at R. Buist's Nursery, Rosedale, a fewweeks since. It is not yet, that we can see, in the catalogues of European nurseries. It is a shrub, of the habit and general appearance of the Camellia, with rose coloured flowers like those of the single C. japonica but in structure very different. Dr. J. E. Planchon, in the "*Flore des Serres*," describes it thus: "In the centre of the supposed flower are stamens in great number (50), not arranged in a single circular series, but inserted by groups of ten around five central points, each occupied by a pistil with two carpels; in other words, five hermaphrodite flowers, with ten stamens, wishout any trace of petals. What then are the rose-coloured pieces of the supposed single flower? Bracts of a petaloid involucre. And those rough pieces, resembling a calyx? Bracts still. In fact, you have before you a real niche of flowers, of poor naked flowers, which nature, like a tender mother has placed in a charming receptacle after her own fashion." Judging from the figure, the flower will be very attractive, and as they hope it will prove hardy in England, it may be so in our Southern States. It is a native of China.

Bouvardia leiantha. We think this an improvement on the well known favorite B. triphylla; having the merit of blooming when smaller, of a better colour and larger head. It has been in bloom at Mr. Knorr's in West Philadelphia. A plant was also shown at the last meeting of the Pennsylvania Horticultural Society by Mr. Cope's gardener.

New Ipomœa. At Mr. Buist's we saw a new seedling Ipomœa, which was, with the exception of the Pharbitis limbata, the most beautiful we have ever seen of the morning glory tribe. It is of a beautiful sky blue colour, in size equal to I. Learii, with the merit of blooming when quite small.

Dipteracanthus spectabilis a semi-herbaceous shrub, with numerous bright blue flowers. It is a rapid growing plant, and the blooming season of long duration.

A correspondent at Waterbury, Ct., informs us that Horticulture is greatly on the increase there; several greenhouses have been erected, and others are in course of completion. Grape culture under glass is now being engaged in with spirit.

Testimonial to the late A. J. Downing.

A circular has been issued by the committe of the American Pomological Society, appointed to collect subscriptions, and make arrangements for a testimonial in memory of the services rendered to Horiculture by the late A. J. Downing.

Circular of the American Pomological Society.

The undersigned were appointed a committee by the American Pomological Society, at its late meeting in Philadelphia, (with power to add to their number) to solicit from individuals subscriptions, each of one dollar or upwards, to procure such testimonial as the committee may deem suitable and expedient, in memory of the lamented Andw. Jackson Downing.

His private virtues, his great worth and important services in Horticulture, Rural Architecture and the various branches of terra-culture, and his numerous and valuable publications, justly entitle him to this distinction.

In discharge of the duty imposed on us, we transmit to you this circular, and earnestly request your prompt co-operation in fulfilment of this benevolent design.

Associations as well as individuals who may receive this circular, are requested to transmit by mail or otherwise, their contributions to either of the subscribers, who will register their names, residence and subscription.

Marshall P. Wilder, Boston; Robert Buist, Caleb Cope, Philad'a.; H. W. S. Cleveland, Burlington, N. J.; Benj. Hodge, Buffalo, N. Y.; F.R. Elliott, Cleveland,O.; Lawrence Young, Springdale, Ky.; W. D. Breckenridge, Washington, D.C.; John A. Kennicott, Northfield, Ill.

The several Vice Presidents of the American Pomological Society, and the chairmen of the various State fruit committees are hereby constituted members of the above committee, with authority to appoint associates in their respective States and Territories.

M. P. WILDER, Ch'n.

Newspapers and periodicals will please notice.

Our Monthly Tour of Inspection

HELENDALE NURSERY, Darby road. Mr. Dick has lately removed to his new place here, and has four houses and one in course of erection, each 130 feet by 24. Camellias and Roses seem to be the plants especially cultivated; of the former he has about twenty thousand plants. He also cultivates Azaleas, which are sold in quantities to the trade. All the houses are heated by iron pipes, and water will be introduced by hydraulic rams, driven by a little creek which runs through his premises, and into which his land is drained. We also noticed some fine specimens of dwarf pears, and some ornamental trees. The Roses are grown on their own roots, as Mr. Dick thinks they succeed better than the standards.

CAMELLIA PLACE, West Spruce Street. Mr. Mackenzie, the proprietor of this nursery, is one of the few who have not been driven out

of town by the requirements of building. He has there a very large and fine stock of Camellias, some of them new varieties, such as the Queen of Denmark and Archduchess Augusta; also several of his own seedlings, his last one, Jenny Lind, being among the best American varieties. We noticed a large stock of Conifers, Araucaria excelsa and imbricata, Juniperus excelsa, Thuja plicata, Taxus elegantissima, &c.; a large assortment of Acacias, twenty varieties of Azaleas, and some fine horse-shoe geraniums, the fine white flowering one, and Cerise unique, Flower of the day, and several other new scarlets.—In the hothouse were fine young plants of *Medinilla speciosa*, *Ixora bandhuca*, *Hoya bella*, several *Aeschynanthus*, *Centradenia floribunda* and other choice plants. Over the rafters of this house was trained a very large specimen of Bignonia venusta, which furnishes every year hundreds of clusters of its beautiful flowers. In frames was a large stock of the beautiful Deutzia gracilis. The Fuchsias were not in bloom, but we saw plants of Ajax and Alpha, dark, and of Expansion and Beauty of Holgate, light varieties. One or two fine plants of the new Campanula Vidalii were on the stages, but it has not yet bloomed in this country to our knowledge.

Those who wish to see a handsome and well kept place, should visit the gardens of the Philadelphia Almshouse, under the superintendence of Mr. Graham. A large plot is laid out adjoining the insane department, which is the fruit and vegetable garden, and part of it is devoted to flowers, of which there is a fine collection. The southern side of the garden is bounded by the beautiful Althœa hedge, mentioned by Mr. Buist in your September number, a sight of which in bloom is alone worth a visit to Blockley; the variety is we believe the painted lady, rose color and white. At present there is of course nothing to be seen out of doors, except neat, well cleaned beds and borders. The box edging is very extensive, and is kept well trained. A single pitch house is on the north side; and like the outside it is kept in the neatest order. The Camellias were just coming into bloom, and we noticed many fine varieties; Roses and Geraniums occupied a large part of the staging. Mr. Graham has a fine variety of Cacti, one of which, *Phyllocactus Grahamii*, a well known seedling of his, we think the finest hybrid of this family ever raised. He has also produced an anemone-flowered Camellia, which bears his name. Kitchen gardening is carried on here very extensively, the large population of the establishment requiring a great supply; as much as twenty bushels of tomatoes have been used in one day. The labour is performed entirely by paupers.

Federal Street Nursery, R. Scott, proprietor, is located on Schuylkill Sixth, below Federal street, and although in a location by no means inviting at present, from its contiguity to brick fields, will

no doubt soon be in the centre of a flourishing and pleasant district. The famous Neck where market gardeners congregate, and draw from every foot of soil, quantities of "Truck," which cheers the heart of the housekeeper in late winter and early spring, is a locality well known. Horticultural spirit seems to be extending itself into this hitherto unpromising neighborhood. R. Scott has succeeded in collecting into his greenhouses a rare and choice assortment of ornamental plants; his selection of Roses is choice, his Pelargoniums well cultivated, his flowers for bouquets of the best description. His plants of Camellia are healthy and of rare sorts, and from his skill and attention to propagation, we have no doubt but that he will have collected in a few years, a choice assortment of the Horticultural gems of the day.

GERHARD SCHMITZ now occupies the Passyunk nursery, formerly of R. Buist, below the prison. This is the mart for Dahlias in all varieties, for Mr. Schmitz devotes much of his attention to this class of flowers; his seedlings are justly celebrated, and can compete with those of any other cultivator. His seedling *Star of the West*, struck us during the past season as worthy of note amongst the immense variety of this much cultivated flower, which seem now to command re-awakened interest. Proceeding further towards the Delaware we find ranges of glass still increasing; there must be Horticultural interest somewhere to warrant the investment of so much labour and capital in this precarious business. James Bisset, Jr., has taken a portion of ground with greenhouses, on Fourth street below Wharton, where we noticed a large stock of Roses housed, and no doubt he purposes competing with his fellow labourers in the ensuing season. We believe Wm. Hall, late of Andalusia, has also taken a portion of ground here. The only amateur's garden we noted in this neighborhood was that of T. Tasker, at the Pascal iron works, on Fifth St.—gardener, Mr. Barron. The garden is limited, but contains a neat range of conservatory, filled with choice exotics. This is at least a beginning, and others will follow.

Maryland Horticultural Society

The fall exhibition was held in the large saloon of the new Assembly rooms, on the 22d, 23d, and 24th of September. A superb display was made, worthy the attention of the numerous visitors who honored the exhibition with their presence. The attraction of the meeting depended in a great measure upon the collections of plants and flowers from the collections of Dr. Edmondson, Mr. J. Feast, and S. Feast & Sons. Among those of the former were many specimens of botanical and historical interest. The Mahogany tree, *Swietenia Ma-*

hagoni,) various species of Ficus, Fourcroya, Taxus, Cactus, Crinum, Dracœna, Sago and Date Palms, &c. Mr. J. Feast exhibited a collection of new and rare plants, a *Bonapartea juncea*, (which has since flowered,) *Gloriosa superba*, *Centradenia floribunda*, many varieties of Arum, Hoyas, and Eschynanthus, Echites Picta, *Dipladenia splendens*, *Allamanda cathartica*, with many others. S. Feast & Sons also had an extensive display. Collections of flowering plants were also shown by Thos. Winans, Esq., Messrs. Pentland & Bro , and E. Kurtz, Esq., the latter gentleman had a beautiful *Crowea saligna*, and some fine bushes of the yellow Tea Rose, in the culture of which he excels. Besides these, there were many contributions, making altogether a very attractive display, superior to any thing ever seen in this city.

In fruits there were many exhibitors; S. Feast & Sons sent a very large collection, including all the best varieties. Mr. Jardin, of Washington City, also furnished a fine assortment. N. Popplein, Esq. sent fine specimens of twelve varieties; Mr. Kemp a dish of very large Seckels, and Thomas Winans, Esq., some superior white Doyenne.—Mr. Kurtz exhibited beautiful fruit from dwarf trees, and Mr. Fuss large Winter Bonchretien and White Doyenne. These fruits were all very fine, and rather above average size. Late pears ripen to greater perfection here than at the north.

Grapes, as usual here, were abundant and fine; Foreign varieties seem to arrive at tolerable maturity in the open air in this locality.—Capt. Pracht exhibited specimens of B. Hamburgh, not much inferior to those grown under glass. From the same gentleman very fine Catawbas were noticed. The native grapes were largely represented—Herbemonts cluster, Schuylkill Muscatel, Bland Virginia, Isabella, and Elsinburg were exhibited. Other foreign sorts grown out of doors were the Sweetwater, Madeira, Red Tokay, Cannon Hall Muscat, and Zinfindal. These were pretty fairly ripened, and free from mildew. George Brown, Esq. sent a collection grown under glass, among which were good White, and Grizzly Frontignacs, Muscat Alexandria, and B. Hamburgh.

Peaches were nearly all gone; some seedlings from Dr. Wolff were very large, as also were two baskets from Mr. Larkin Young.

Several plates of figs gave indication that this fine fruit is not neglected; Apples were not numerous, Dr. Edmondson sent a large basket of Siberian crab.

Vegetables were largely represented. Mr. C. Whittemore, J. Register, D. & J. Lushby, and Dr. Edmondson had each a general assortment, principally of superior growth; Mr. Kemp sent a dish of green peas; Dr. Edmondson exhibited a bushel of St. Helena Kidney Potatoes, a variety likely to prove worthy of more extended cultivation.

The enormous Cabbages, Beets, Squash, Carrots, &c., fully sustained the reputation of our gardeners in the production of esculents.

Flowers were in such profusion that we considered it a hopeless task to enumerate the contributors.

Ornamental designs were sent by Messrs. Pentland Bro., Greenmount gardens, S. Feast and son, C. W. Stobie and J. Feast. W. H. Kimberly exhibited a rustic flower garden, which was much admired as displaying pure taste in arrangement and design. The floral temple of the Messrs. Pentland, was an object of much admiration and displayed much artistic skill in its construction.

The Society has much reason to congratulate itself upon the success of its efforts so far. The past exhibition give sufficient evidence of its utility, in the increasing taste for, and the improvement in Horticultural matters. W. SAUNDERS.

The above report was intended for publication at an earlier date, but was unavoidably held over.

VEGETATION IN CALIFORNIA.—The "N. York Agricultor," contains some details furnished by Mr. Shelton of San Francisco, as to the size of some of the trees and fruits of that rich and prolific region. Many of our readers will be disposed to smile at the statements, amongst which we note the following: "A tree, across the trunk of which, as it lay upon the ground, he strode twelve paces; three yoke of oxen stood at the same time on the stump. Another tree two men worked upon six weeks, and made a thousand dollars' worth of shingles. Mr. S. has had cabbages which weighed from 50 to 60 lbs. each; the leaves of growing cabbages having been measured at their greatest width, were 12 ft. in diameter." We shall not add the enormous size of the potatoes cultivated there, as the account would make our cultivators feel quite mean. We hope the accounts are not exaggerated, as those who get tired of gold digging may turn with equal profit to the cultivation of the soil.

TO CORRESPONDENTS.

We hope that our arrangements for the issue of the new volume will meet the wishes of our friends and correspondents. We have received communications from many of them already, promising increased energy on their parts to extend our circulation, and hope that they will also favor us with their experience in Horticulture, for the benefit of our readers. Those who wish to subscribe for the new volume, will please forward their names to the office, 63 Walnut St., Phila., or to any of the agents named in our list.

Received—A descriptive catalogue of stove, greenhouse and herbaceous plants, from J. E. Rauch, Florist, Brooklyn, L. I.

We often have applications from different parts of the country for catalogues of different nurserymen, which it is not always convenient for us to supply; if those who issue catalogues would send us copies, *post paid*, we could furnish them when required.

ERRATA.—Page 273, for *Grand Duchesse Iteline*, read "Grande Duchesse Heléne."

THE

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AND

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ACHIEVEMENTS IN HORTICULTURE.

Nothing is more beneficial in stimulating us to increased exertion in the accomplishment of what may appear a difficult undertaking than to take a retrospective glance at the obstacles which have been already overcome. Whether in science or art, we have arrived at a stand still, and that the question arises of the possibility of further progress;—the recollection of difficulties already surmounted, gives hope of future success. As inorganic matter has so often yielded to the combined efforts of the inventor and mechanic, until it is difficult to surmise to what point their energy and perseverance may lead them; so the horticulturist in his department may survey with satisfaction the success of schemes to modify the arrangements of nature in the distribution of vegetable forms over the surface of the globe, and look back with satisfaction to the achievements in his department, hoping that since so much has been done, there still exists a means of effecting what remains to do. The progress of civilisation and the study of the objects which comprise the organic creation, has created a desire to multiply those forms around us, that we may gratify our minds by observing them in their changes and stages of growth and development. But limits having been fixed to the local disposition of these objects, so that a certain plant or tribe of plants, or a certain animal or tribe of animals has been so organised as to flourish under certain circumstances of climate, soil, and other natural provisions, man could not thus gratify his taste until these peculiarities were overcome; and hence the study of the several circumstances involved in this adaptation of means to ends. In the infancy of this attempt to overcome the provisions of nature in the distribution of plants, by removing from their native forests the objects deposited there, and placing them under circumstances such as the ingenuity of the naturalist could at the

time devise, we may well imagine that many disappointments were experienced, and that the progress in this branch of science was slow and uncertain. By constant attention and perseverance, however, effects were traced to causes, and in the gradual development of human intelligence, laws were observed and defined which it was proved regulated plants in their development; and from age to age, as other branches of natural science progressed, Horticulture also advanced.—The advantages which accrued from the facilities it afforded for the examination of the component parts of plants were most important, as the vegetable kingdom contains so many essentials in human economy that their character and composition was a most useful subject to engage the attention of the student of nature. If we consult one of the treatises on plants, published before Botany, as a science, began much to be studied, we will find the most detailed accounts of the virtues of such plants as came under the notice of the herbalist, there is not a single individual but has had attached to it a long line of *vertues* almost entirely lost sight of at the present day, or cast in the shade by some more powerful extract of a native of the tropics. The fact is clearly perceptible, that tropical plants, in a living state, were little known in English gardens in the days of Turner, who flourished in the middle of the Sixteenth Century. As the science of Horticulture is so closely connected with that of Botany, we may expect to trace their cotemporary progress; and when we consider what even a century has effected in making us familiar with tropical forms of vegetation, when we are now quite familiar with plants which a century ago were known only by what were deemed fabulous accounts—when the living plant from the most remote and inaccessible tropical forest can now be inspected in our conservatories, we must admit that at least something has been done. We cannot pretend to form an opinion as to what may be achieved in the next century; but if we calculate by comparison with the past, we must expect great things. The immense structures of iron and glass which are now erected with no more difficulty than was some years ago experienced in constructing an ordinary conservatory, afford us reason to hope for great things in plant cultivation. Methods of heating such structures have also reached a point of comparative perfection, and from what we have seen of plant culture even in our own vicinity during the past season, we are led to conclude that more difficulties will be attempted and overcome. Many points in horticulture which were but a few years ago estimated as difficulties, are now no longer considered so; and many which now occupy the same position in the minds of the majority of cultivators, will ere long be classed amongst the common routine of operations. In attaining these results, there is much perseverance and energy required; and those who hope to share in the benefits and improvements

which increased knowledge ensures, must first endeavor to obtain a fair proportion of that knowledge, and not to lag behind in this progressive age of enlightenment. Whether we consider horticulture in the means it affords of supplying, to a great extent, food for our consumption, or the means of making ourselves acquainted with the character and composition of a large proportion of the organic forms with which the globe is invested, it must still be esteemed as one of the most useful pursuits in which mankind can be engaged. The tall palms of the tropics have been introduced to the conservatories of temperate countries, and flourish there under the care of the gardener. The numerous forms of Epiphytal Orchids, which from their peculiar habits might have been supposed almost beyond the skill of the cultivator, now flourish luxuriantly in the hothouses of our amateurs Rare and curious vegetable forms, the products of which have been known and used in the arts, may now be viewed in the original state, without visiting their native habitat, which was beyond the reach of many ardent lovers of nature. The Coffee Tree, the Tea plant, the Sugar Cane, the Date, Palm, the Cocoa Nut, the Croton Oil plant, the India Rubber, Gutta Percha, and Vegetable Ivory, are all reduced to cultivation, and form objects of interest to those who visit plant collections; and in fact there are few remarkable plants already discovered which have not been introduced into some of the various collections which now enrich those countries where science is cultivated. Nor has the progress of adapting to our wants such foreign fruits and esculents as are susceptible of cultivation been less than in the branch just mentioned. Many of the fruits bestowed by nature on countries of a higher temperature than our own, have been adapted by skilful cultivation to our uses, and are raised in abundance by the enterprising gardener. Some new object is daily added to the list of those already brought within the province of the cultivator, and it is hoped that we will go on progressing, rendering the beautiful and useful forms of vegetable life familiar to the intelligent public, which are now beyond their reach.

THE CINERARIA.

A few remarks on the cultivation of this showy family of plants may not be unacceptable to your amateur readers, as its brilliancy of colors and profusion of bloom render it well worthy the attention of those who desire variety without much expense or care. The Cineraria is one of those plants which may be cultivated without much difficulty, and of which there is an endless variety produced from seed. Many prefer raising the plants from year to year from seed; by sowing in the fall and keeping them growing du ing winter, they have them in a proper state for flowering in the spring before the extreme

heat of summer overtakes them, as they do not seem to flourish when exposed to it. They may be had in bloom through the entire winter by proper management.

After the plants have done blooming, remove them to a shady situation, giving them water but sparingly; about the middle of July repot them in a rich light soil to start the side shoots into growth, as they are the best for the new stock. As soon as they are sufficiently advanced, separate them carefully and pot into small sized pots, which should be placed in a frame and kept rather close until they get established, when they will require plenty of air, and should be kept as near the glass as possible, and repotted as they require it; they should never be allowed to become pot-bound, as their growth will thus be checked, and they will have a tendency to send up flower stems prematurely before they have attained sufficient size or vigor. They should never be allowed to wilt for want of water, as it incurs a loss of foliage and checks the vigor of the plant, thereby diminishing its blooming properties. An important point is to preserve them from the green fly, as they are very liable to be attacked by it, and it increases rapidly in numbers upon their foliage if not subdued by fumigation with tobacco. After the plants begin to throw up their flower stems, a watering with manure water (prepared from farm-yard manure) about twice a week, will greatly assist them in increasing the size of the flowers and in their expansion. When fully in bloom they should be kept cool and shaded from the sun, as by this means they will remain longer in bloom. They seem to flourish best in a compost of loam and sand, with a little leaf mould; no plant seems to succeed better by the application of diluted liquid manure, which may be easily procured by dissolving some of the farm-yard manure, and diluting it sufficiently. There are a great many varieties of the Cineraria now in cultivation; and new seedlings, of brilliant color and endless variety, are annually produced from seed. J. S.

Waterbury, Ct.

LUCULIA GRATISSIMA.

This is one of the most beautiful and most deliciously fragrant of all our winter flowering plants. With a little management, it may be had in blossom from September to March; and, with the exception of Pinceana, I am unacquainted with any plant which flowers at this season, and requires so little artificial heat, and so little care generally in its management, which is equal in respect of both beauty and fragrance. That it is not more generally cultivated is owing, I believe, to a somewhat prevalent, but mistaken notion, that it is difficult to manage. I must, however, admit that it is somewhat difficult to pro-

pagate, as cuttings, when not well matured, are apt to damp off in bottom heat; and when too hard, they frequently take so long to root that they exhaust the patience of the propagator; and it is difficult, if not absolutely impossible, to give instructions which would enable the inexperienced person to select cuttings in the proper stage of ripeness; but practice and careful observation will overcome this difficulty, and the Luculia will be found to root in bottom heat in a shorter time than is required by many of our favorite plants. Until this is the case, however, adopt the following method, which, if slow, has the recommendation of being sure.

Select cuttings of short-jointed pieces as early in the season as they can be had in a rather hard state. These may be obtained in May, if a plant is left without being cut down after flowering. Slip them off with a heel, and use the knife merely to remove any loose bark which may extend beyond the wood, and to divest them of superfluous leaves. Insert the cuttings thus prepared in small thumb pots filled with sandy peat, and give a moderate watering, to settle the soil, &c. But observe, with respect to the soil, that it should be in a rather moist state when used, as the cuttings are impatient of damp, which, in the event of repeated waterings being necessary, it is difficult to prevent. After potting, place them in a shady situation in a house, the temperature of which may average 55°, and cover them with a hand-glass. The only farther attention which they will require, will be an occasional sprinkling of water; this should be applied towards the evening, the plants left uncovered until the following morning, and in cloudy weather it may be necessary to remove the hand-glass, or place it so that there may be a circulation of air, so as to prevent damp. If cuttings are properly attended to in these respects, and allowed to remain during the summer in some quiet corner, the probability is that nine-tenths of them will root. They should be carefully attended to during the winter, and should not be thrown away; even if after having been in the cutting-pots the whole summer they should not be found rooted, give them the farther chance of a little bottom heat during next January. As soon as they are fairly rooted they will grow away freely, and should be shifted into a size larger pots, and gradually exposed to a freer circulation of air. No advantage will be gained by keeping them in a temperature exceeding 60°, as, if they are kept in a warmer place, they will grow weaker, and will require so much stopping to keep them bushy that the loss will probably exceed the profit. As the sun becomes powerful, it will be necessary to shade at least a few hours during the middle of the day, for this plant is exceedingly liable to suffer from the direct rays of the sun; and I have never been able to do any good with it, except when I could protect it in this respect; and I have also found that sudden exposure to dry-

ing currents of air injures it more than most plants. With attention to its wants in these respects, and if allowed plenty of pot room, and kept free from insects, the plants will form nice specimens by the end of the first season, and may each produce flowers, but this will greatly depend upon their having been stopped at the proper season. The weaker plants should not be stopped at all, and there will be nothing gained, as respects the production of blossoms, by stopping even the stronger plants more than once, and none should be stopped later than the middle of July, or the first week in August.

As soon as they have pretty well ripened the wood from which flowers are expected, they should be kept rather cool, or they may be removed to a shady, but airy situation in the greenhouse, or to any place where they can be assisted to harden their wood by a cool, dry atmosphere. Such of the plants as have never been stopped will probably show flower towards the middle or end of September, when they may be removed to a damper atmosphere and kept rather moist, so as to encourage them to develope their beauty and fragrance; and if the plants are removed from the greenhouse, or cool situation in which they were placed to ripen their wood, to a warmer situation, at intervals of about a fortnight, they will afford a succession of flower for at least three months. While in blossom they will be found to require a rather dry atmosphere; and unless this is provided, their beauty will be short lasted. I have found a sitting room window to suit them exceedingly well at this time, but situations where the temperature will average from 40° to 45°, and where they can be protected from damp, is all that they require.

When they have done flowering, the plants should be rather sparingly supplied with water for a fortnight, previous to their being cut back, and they may be stowed away in any spare corner of the greenhouse or cold pit, where they will be safe from their great enemy—damp. After being treated rather hard for a fortnight, they should be cut back sufficiently to secure a compact, bushy growth, and now is the time when they can, with least trouble, be thoroughly cleared of insects. They are especial favorites with the black thrips, as most delicate plants are, and if these pests have a residence about the place at all, it may be looked for upon the Luculia, and they should now be carefully removed at any expense of time and labor; for if they are permitted to establish themselves they will do much injury during the ensuing season. After the plants have been cut back and cleaned, a portion may be encouraged to grow early in the season, so as to come into flower soon in the autumn; but it will be advisable to introduce them into heat very gradually, otherwise they will break their uppermost buds only, and will consequently become naked below. If the plants can be kept during their second season's growth in a moist

growing atmosphere, where they will receive abundance of light and protection from the direct rays of the sun during the summer months, and also guarded against the attacks of insects, and allowed plenty of pot room, they will form handsome specimens, and flower abundantly during the dull months of winter.

With respect to soil, the Luculia is not difficult to accommodate. For its pot culture, I use about one-half turfy-peat, and one-half light turfy-loam, adding a portion of silver sand, more or less, according to the nature of the other materials.

Those who have room for the Luculia in the conservatory border will find it a most eligible plant for such a situation. But it succeeds best, shaded from the direct rays of the sun from the beginning of May to the end of August; and in order to bloom it in perfection, it also requires to have the house kept rather close. It will not thrive in a temperature under 40° or 45°; for where the temperature does not average this, the flowers are liable to damp off. Planted out, it will thrive perfectly in any light soil, whether peat or loam. It will be found to require some attention, in order to keep it clear of insects, and also the same treatment with regard to stopping and cutting back, as recommended for young plants; but as it cannot receive any assistance in the way of heat and moisture, never stop later than the middle of July.—Alpha. (*of the Gardener's Chronicle.*)

REPOSE OF PLANTS.

A taste for the cultivation of flowers is now being so extensively diffused, I think it would not be without its use to endeavor through the medium of the "Florist" to draw the attention of amateurs to an observance of some of the more prominent laws on which are founded the successful practice of plant cultivation. It is a well known though much neglected fact that all plants must have a shorter or longer period of entire rest and repose, Were the amateur to keep this fact constantly in view he would have much fewer losses to regret and a far healthier collection than is generally the case. To show that this repose is necessary we have only to point to nature, and ask what is it that imparts to winter its dull and death-like appearance? we answer, nothing but this universal sleep of nature. If the cultivator will have success he must copy nature, for he may rest assured she does nothing in vain, and in proportion to the faithfulness in which she is followed, will the measure of success be. It must ever prove a vain and abortive course to force the growth of plants when they ought to be dormant: in this state of hybernation they are collecting a store of nourishment, which when the proper season arrives will enable them to perform all the various functions for which they are eminently adapted. Having ascertained the truth of this

natural principle of vegetable repose it can be turned to good account in the artificial way in which plants for the most part are kept in our plant structures. We can assist, hasten, retard, or complete the work as circumstances may dictate; and seeing that this is the most favorable condition for plants surviving unhurt the rigor and severity of winter, the cultivator will at once perceive the importance of observing this, and allowing his plants to arrive at this stage before the severity of winter overtakes them in a growing and succulent state; and moreover, they will require to be treated while in this condition almost as if they were dead; they require no stimulants whatever, for if heat and water were to be administered at this season, a spring time would be created in the house while there is little sun light, so essential to their proper development. Though this neglect of a universal law, plants are not allowed the necessary rest, but are forced to dwindle on, for they cannot be said to grow, and are robbed of all the material necessary to promote vigor, hence every expectation is blasted, every hope frustrated through ignorance of a principle which may be seen in full operation by all who choose to use their senses. This is a common error among cultivators, they are anxious to anticipate, but in doing so they commit a fatal mistake; they are anxious to speed, while they are doing all they can to impede; however, all plants do not require the same period or the same season of repose, yet the law is general and the exceptions must be corrected in practice. A good collection may contain plants from all quarters of the globe; some may have been obtained from the recesses of the forest where the sun's rays scarcely reach, others from the mountain side, where a pure air, and a clear light prevails; this points out to the intelligent cultivator the necessity of making himself acquainted with all that pertains to his plants individually; the country they come from, their widest range of distribution in that country, all the various elementary influences to which they are there subjected, the soil in which they attain their greatest luxuriance both in flower and foliage; in a word, all the facts connected with their native habitat, becomes very useful in one way or other. When this knowledge is attained, cultivation becomes something more than the work of chance, it ranks as one of the sciences; in fact it is only where thus followed out that an intelligent mind derives from it that degree of pure pleasure which it is so well fitted to afford, when success can be traced not to chance but to skill and forethought. Our advice to every amateur is to purchase some work on the physiology of plants and make himself master of it, in all its details; it is not a dry and uninteresting study, but one richly fraught with pleasure, and moreover he will be constantly seeing, in attending on his collection of plants, illustrations of what he reads; he will as certainly see cause in this, as in other matters, he will learn to assist the efforts of nature rather than to obstruct her.

Amateurs oftener kill through excessive attention than neglect; the means are different but the end is the same, death follows either. He may also learn many useful lessons by close observation, when he has an opportunity of being in the country; every mountain, wood, and glade are ever ready to offer some illustration of the great laws by which nature is governed. He will often see instances of plants having come under accidental circumstances which have produced a new aspect. This may turn out important information; in fact, information useful in carrying out his operations. If a richness of flowering has been the result of a certain cause, it may produce similar results with him. If a luxuriance of foliage has followed, the same cause may produce a like effect. If gracefulness of outline, such may be produced again. It will be for him to note these causes, to store up these facts, and make use of them as occasion may require; he may imitate, modify or avoid as best suits the end in view. No information of this sort, or indeed of any sort is useless, it will be useful sooner or later. The man possessing a general acquaintance with the internal structure of plants, and the various relations which the different orders bear to each other, combined with an extensive knowledge of the numberless external effects and transformations, produced by causes under his control, has an immense advantage over a person who cultivates his plants according to mere verbal directions, or does as he sees or has seen others do. He knows that in certain seasons such and such treatment is necessary, but he is ignorant why he ought to do so. Now plant cultivation is modified by so many circumstances, many of them beyond control, that to know that this treatment or the other is required, is not all; he must know when and why it is necessary. If this knowledge from experience and observation be wanting, nothing can adequately supply its place. The best calendar of operations will not make a good gardener, its use is merely to refresh the memory, for were such full and correct as they could be made, the farther they would be from the end at which they aim. Their value decreases as the directions for one portion of the country do not apply without modification to all parts; for this reason I look upon a work such as the "Florist" as rendering the most important service to amateurs, improvements being noted as they are discovered, and that too at a small expense. However, no work can supercede personal study and observation in the lover of plants, all his exertions tend towards the observance of natural laws, and the amateur, even with his artificial structure and confined root room, will have the most ample satisfaction and reward for his labor.

A Subscriber.

☞ Catalogue received from R. Scott, Federal Street.

On the Culture of the Hollyhock.

There are few plants that contribute so much to the embellishment of gardens and pleasure grounds, as the Hollyhock; whether it is planted in lines, masses, or detached specimens, this gorgeous gem of flora is certainly an object worthy of admiration. It rears up its lofty pyramids of flowers, as if in defiance of its more humble compeers; being a vigorous grower, easily propagated, and of such dazzling beauty, it is indeed a wonder that it is not much more introduced into flower gardens and shrubberies than it is, presenting as it does a brilliant display of flowers for many months, and at little or no expense or trouble to the cultivator; indeed it will yield to no other flowering plant in facility of culture, and the brilliancy and variety of color it displays.

The Hollyhock will thrive in any common garden soil, provided it be deep and rich, if it is not, trenching and manuring must be resorted to. This is best performed in autumn; trench to about the depth of two feet, if the ground will admit of it, incorporating plenty of manure. As the operation proceeds, leave it in as rough a state as possible, or lay it up in ridges, so that it may have the full benefit of the winter's frost. In spring, previous to planting, dig in a good dressing of thoroughly decomposed manure, after which the ground may be considered in a state fit to receive the plants. The propagation of the Hollyhock is very simple; it is generally propagated from eyes much in the same manner as the grape vine. When the plants are in flower, select those you wish to propagate; take a stem and split it down into lengths separating each bud, pare away the pith, and cut them about two inches below the eyes; care must be taken that it is a leaf bud, rejecting all those that are developing flower buds. When the eyes are prepared, insert them in a frame of light sandy soil; keep them shaded until they are rooted, when they may be gradually exposed to the sun. They may also be increased by cuttings, but eyes are preferable as they generally make the best plants. If the situation be dry they may at once be transplanted to their flowering quarters, but it is better to pot them in middling sized pots, and keep them in a cold frame or greenhouse all winter, and if turned out in the spring, as soon as the weather will permit, they will generally do better than if planted in autumn. In planting allow four feet between each plant, if in a single line, but if in clumps three feet will be sufficient. As soon as the stems are a foot or eighteen inches high, thin them out, leaving one, two or three stems, according to the strength of the plant, or the position in which it is growing; thus, plants growing in the centre of a clump may be allowed to have but one stem, while those growing towards the outside may be allowed two or three, which will keep them from

growing so tall. Each stem should have a separate stake, which need not be more than three or four feet above ground; stake them before they get very high, and secure them well by tying, and they will grow erect. In dry weather they will be greatly benefited by liberal supplies of weak liquid manure, taking care not to let it come too near the stem. If fine flowers for exhibition be wanted, the blooms will be improved by cutting away all laterals, thinning the flower buds, and pinching in the top of the spike; but while this improves the individual bloom, it will materially shorten the period of flowering and perhaps disfigure the appearance of the plant. After they are done flowering, cut down the stems and clear away all decayed foliage. They will require some half decayed leaves, tan, or such like, laid round their necks during winter, as the frost is apt to injure them in damp situations. To raise Hollyhocks from seed, always save it from the best sorts, sow it as soon as it is ripe, in any dry sandy soil; if not sown too thick they may remain in the seed bed all winter, in spring transfer them to a piece of well prepared ground to prove them. They may be planted pretty close, say about a foot or eighteen inches apart; attend to staking and clearing away laterals; when in flower carefully mark those that are worthy of growing and propagate them. If the seed be carefully saved you will seldom be disappointed in having some good sorts, which will amply repay any trouble connected with them. The Hollyhock is admirably adapted for planting in clumps, and if proper attention be paid to the harmonizing of colors. they have a charming effect. They may also be planted in single lines to good advantage, and a few of the lighter colored varieties may be introduced into shrubberies, where they serve to relieve the monotonous appearance of a mass of green foliage. In whatever situation they are planted, they will seldom fail to attract attention from all lovers of Flora. ALTHÆA.

On the Cultivation of the Vegetable Garden.

DRAINING.—In making a few remarks upon some of the most prominent points in the cultivation of the soil, the first and most important inquiry is its relation to water. It is useless to attempt further improvement on a soil naturally wet, until it is drained. Probably, it rarely occurs that a "wet spot" is fixed upon for garden purposes, but it is necessary to drain all soils more or less, before the utmost advantages of deep cultivation can be secured, and deep culture is absolutely indispensable to produce well matured and fine flavored vegetables. I have very often seen the remark made, that draining was of no use here where the sun is so powerful, and droughts frequent, since a deficiency of moisture is commonly the greatest evil the vegetable grower has to contend against. It is for this very reason that I would

recommend underground drains. Not so much for taking off water, but as a means of increasing its retention in the soil, and allow an admission of air to the roots of plants. In gravelly and sandy soils, draining in conjunction with deep cultivation will secure a more ample and lasting supply of moisture in dry weather, and keep vegetation in a luxuriant condition. This may seem paradoxical, but it is nevertheless true. The soil is rendered more porous, water percolates freely into it, carrying nutritious matter to the roots, air follows, holding moisture in suspension, and when the surface supply fails, this suspended moisture is again brought up by capillary attraction, a principle in cultivation which is not sufficiently understood or recognized.

Clayey soils are still more improved by this system of underground ventilation. A compact surface is formed immediately below the cultivated soil, which forms a perfect basin for the retention of water to the exclusion of atmospheric gases. The strongest clays have their "weak points;" here we find a natural crack, and there a vein of sand; here again a bit of gravel and there a stratum of decomposed vegetable matter; so long as there is no vent underneath, these remain comparatively inactive, but undermine them with drains, and their action is at once apparent, the subsoil that before held water as in a basin, now transmits it like a filter. As the water sinks into the soil a supply of fresh air immediately follows. From the increased porosity of the soil the water that falls from the clouds conveys the ammonia, and carbonic acid to the roots of plants, which it has absorbed during its passage through the atmosphere. The air admitted disintegrates and decomposes the mineral ingredients in the soil, rendering them soluble and fitted for absorption by vegetation. There are, perhaps, few soils actually deficient in inorganic substances, if properly presented to the atmosphere for decomposition. I consider that the physical condition of the soil (its relation to air and water) is of more importance than the introduction of the most valuable manures, although "the books" would lead us to believe that it is entirely subordinate to its chemical constitution. Chemical experiments have proved the failure of crops to proceed from a deficiency of inorganic matter, although present in sufficient quantity in the soil, yet in a state unfit for the purposes of vegetation. Many and important are the chemical changes effected in this laboratory of nature, when her great agents air and water are allowed sufficient scope. Another advantage derived from the removal of superfluous water in soils, is the increase in temperature they receive. A wet soil is always cold. The heat of the sun is expended in evaporating the water instead of warming the soil; the water must be removed before the soil absorbs heat. On undrained, tenacious soils this is

more observable. In spring plants are deprived of that genial warmth so favorable to their growth, hence vegetation is slow of action. Every shower that falls upon such a soil during summer checks rather than stimulates from the subsequent cold produced from evaporation of the water. SOLANUM TUBEROSUM.

Notices of a few New and Rare Plants,

Flowered this season for the first time, at Springbrook:

CROWEA LATIFOLIA.—A very pretty Rutaceous plant imported from Messrs. Loddiges, by Mr. Cope. The flowers are of a rosy waxy purple, about half an inch across, and come out singly from the axil of each leaf on the young shoots. The leaves are not so long or broad as the old *C. saligna*, but are of a more shining green. Our plant is at this time about fifteen inches high and nine inches across. It commenced to bloom in September; continues to produce flowers abundantly, and will probably for two months more. It thrives well with me in a soil composed of the principal part peat, with the remainder of equal parts sharp sand, loam and leaf mould; I keep it in a greenhouse, kept rather close, and shaded from the direct rays of the sun.

OLDENLANDIA DEPPEI—A Cinchonaceous shrub, very nearly allied to *Pentas* botanically, but very different in general appearance—its chief recommendation consists in its ever blooming property. We received our plant just struck from the original, imported through Messrs. Hogg of New York, last June; it was then in bloom, and has continued ever since increasing in profusion with its age. Each flower is very small, but they come out in about four or five together, and are of the purest white. This plant is now about one foot high, by the same in diameter. It does well in a soil composed entirely of burnt loam and sharp sand, in the same house, and under the same circumstances as the *Crowea*.

ERANTHEMUM SEMPERFLORENS—A beautiful species belonging to the very *essential* family of Acanthaceæ. Our plant was imported from Messrs. Lee, of the Hammersmith Nurseries, London, by Mr. Cope, and is considered one of the best introductions of the season.—The flowers come out in long spikes, most profusely, rather small, but of a fair white. The leaves have the prettiest appearance of any of the family, being of a deep glassy green. The plant is growing in a peaty soil, mixed with a little well decayed leaf mould and sand, but it will no doubt thrive in a loamy soil. It is blooming in a dry stove kept about 70°, and exposed to the full sun.

IPOMÆA FICIFOLIA.—A Convolvulaceous plant, which has also flowered in other Philadelphia collections. We received ours in the spring, from Messrs. Hovey, of Boston. The leaves, as the name

implies, are shaped like those of the fig, but smaller in size. The flowers are of a rosy purple, and are produced very abundantly. It is the best of the perennial "morning glories." It has succeeded well with us this season in a green house, kept in a warm place, but sheltered from the direct rays of the sun, in a soil composed of the most part of rotten turfy loam, enriched with a little rotten manure, and mixed with sharp sand.

If you consider these notes useful, I shall be happy to continue them. THOMAS MEEHAN, Gr. to Caleb Cope, Esq.

Luculia Gratissima.—This beautiful plant has just flowered in the houses of J.F. KNORR, Esq., West Philadelphia. To most of our gardeners it is familiar, but this is perhaps only the second time it has ever flowered in this country, it having bloomed with Mr. BUIST about fifteen years ago. It is certainly a most attractive plant, having a large terminal head of deliciously fragrant pink flowers, each being an inch and a half broad. Each head lasts about ten days.

LECTURE ON AGRICULTURAL EDUCATION.

BY JOHN DONAGHY,

Superintendent of the Glasnevin Model Farm, and Teacher of Agriculture to the Commissioners of National Education, Ireland.

(Concluded from page 113.)

Notwithstanding the taunts which have been, and which are still being levelled at those who advocate the propriety of inculcating on the minds of young farmers the principles of those physical sciences which have relation to agriculture, I cannot perceive why the application of scientific knowledge to the operations of this important art, should be less necessary than it is to those of any other industrial pursuit, whether manufacturing or commercial. Liebig, the celebrated German chemist, says, on this point—"The great desideratum of the present age is practically manifested in the establishment of schools in which the natural sciences occupy the most prominent places in the course of instruction. From these schools a more vigorous generation will come forth, powerful in understanding, qualified to appreciate and to accomplish all that is truly great, and to bring forth fruits of universal usefulness. Through them the resources, the wealth, and the strength of empires will be incalculably increased."

We can readily conceive that in newly settled countries, with a virgin soil to cultivate, a thin population to support, only a nominal rent to pay, &c., defective modes of tillage may suffice for a time in supplying the wants of the inhabitants. But we are not to expect a similar result in an old country, with a dense population, the compe-

tition for land such as to render it comparatively high, and what is equally inimical to successful culture, the greater portion of the land in a state of exhaustion from under cropping.

The consequences which may be expected to flow from a case of the latter kind, may be thus explained:

The population of a country always increases as the means of subsistence increase; but beyond this limit it cannot increase, though it has a tendency to do so; for, when it arrives at the limitation point, counteracting agencies come into operation which cut off the inhabitants, and gradually establish an equilibrium between the produce of the country and the number of inhabitants dependent upon it for subsistence; or else ultimately induce a preponderance of the former.—From the effects thus produced by a superabundance of population, we at once perceive the absolute necessity which exists of using our best endeavors to make the agricultural products not only keep pace with the demands of an increasing population, but also to exceed those demands to as great an extent as possible. I have only to refer you to the unfortunate case of this country throughout the late calamitous years, in illustration of this point, to show you the cogency and applicability of this reasoning. Here, in consequence of the density of our population and the injudicious and sluggish mode of culture generally pursued, the loss of only one of our crops induced an amount of death and suffering too painful to dwell upon. Suffice it to say, that, in 1841, our population was upwards of eight millions, whilst in 1851 it was only about six-and-a-half millions. And a similar result, to a greater or less extent, may be occasionally expected in every densely inhabited country, in which means are not taken to make the agricultural products keep pace with the increase of the people. It would be preposterous to expect that the same imperfect culture which was practised a century ago would be capable of furnishing even our present reduced population with the necessary supply of such products, and a sufficient surplus for exportation. And if our population is to increase, in future, in similar ratio to that which it did in years gone by, so must the products of the land, and our agricultural knowledge also.

But, by what means is agricultural knowledge to be diffused? This is the all-important question. I have already stated it as my opinion that it can be best effected through the instrumentality of the schoolmaster, in conjunction with the present modes in operation. I know that the duties of this officer are at present onerous enough, and that his services are, in most instances, but poorly remunerated; but I should hope that the introduction of agricultural education into his routine of business will not only better his condition, but also confer most important benefits on the rest of the community. Already he

takes a most prominent part in preparing youth for, I may say, every profession in life; a slight extension of his duties will embrace that of the farmer also. To undertake the task, however, with the prospect of complete success, he should receive a course of training in agricultural operations.

The celebrated school at Hofwyl, near Berne, in Switzerland, founded by the benevolent De Fellenberg, and embracing in its regulations the same element of industrial training as ours do, has contributed most essentially to the well being not only of Switzerland, but of other countries. So far back as 1832, it appears that "not less than one hundred village teachers were in training at this institution. These, as De Fellenberg appropriately termed them, were the hope of their country; and well might he say so, as they would communicate the industrial education which they were there imbibing to thousands of pupils throughout the different cantons."

At Hohenheim, near Stutgard, in Wurtemberg, there is a similar institution, which was founded by Schwartz, and afterwards endowed by the king with a royal seat and extensive buildings. The land attached to it embraces an area of 900 acres, on which an exemplification of different branches of husbandry is afforded to its pupils. This establishment is said to have exercised a highly advantageous influence upon the agricultural condition of the most of Wurtemberg.

Prussia has an agricultural college at Moeglin, near Frankfort-on-the-Oder, with 1200 acres of land attached, and has for its president a son of the distinguished Von Thaer. Here, also, both the principles and practice of different branches of husbandry are afforded to the pupils.

Russia has an agricultural college under the immediate patronage of the emperor; and agricultural schools, for combining the science with the practice of agriculture, are in active operation throughout the different parts of the country.

France has an agricultural college at Greignon, with an extent of land connected with it comprising 1000 acres. Here, also, the pupils are taught both the science and practice of husbandry.

It seems unnecessary to refer particularly to any other agricultural schools. Suffice it to say, that in 1850 the number of these establishments, scattered over continental Europe, amounted to about 280. Of this number there were 75 in France, 66 in Russia, 35 in Bavaria, 32 in Austria, 32 in Prussia, 9 in Belgium, 7 in Wurtemberg, 5 in Saxony, 5 in Schleswig Holstein, 2 in Brunswick, and the remainder, for the most, in the duchies and principalities.

Thus we find that agricultural education is now afforded to the tillers of the soil in some of the most powerful, as well as in some of the most enlightened countries in the world. Why should we, therefore, whose

interests are so much bound up with the progress or retrogression of a knowledge of husbandry, hesitate to pursue that course which appears to be the most efficient in dispelling the clouds of ignorance and diffusing the light of knowledge, in reference to this all-important art? the testimony of the agricultural inspector, as recorded in his reports, of the very successful working of all those schools which have been properly organized, and which have had sufficient time to develope their capabilities, prove, to a demonstration, the usefulness of the system. It is not to be expected that in agriculture, as in some of the other divisions of labor, an instantaneously successful result can be obtained. Years of toilsome labor must sometimes be expended on exhausted or unimproved farms ere they can be brought to a remunerative state of productiveness. This fact, however, which is as clear as noon day to every one acquainted with the cultivation of land, has been sometimes overlooked by the opponents of the system; and what was, in fact, meritorious, under the circumstances, actually condemned. I well remember that at the time when the system was first introduced, those who took an active part in its development were met by the sneers and jibes of even the very persons whom it was intended more especially to benefit. But, in due time, the success attendant upon the course of cropping and general management pursued by the agricultural teachers, had the effect of gradually stemming the current of reproach which was levelled at the system ; and we have now the satisfaction of looking forward, with no small degree of confidence, to the no distant day when the example of those teachers will be generally copied, and the blessings resulting from their labors very widely, if not universally, felt.

Few who have given the subject of education that serious consideration which its importance demands will, I should think, object to a mode of imparting it amongst the rising generation of farmers, which has for its principal objects the inculcation of correct principles of husbandry, the infusion of early habits of industry, the proper development of the physical energies, and strict moral rectitude of conduct. It should be remembered that the youth of our present day will, in some ten or fifteen years hence, become the bones and sinews of the country; and that just in proportion to the kind and amount of education now afforded to them, will the advancement of the community, in social improvement and national prosperity, depend.

I have now, gentlemen, stated my views in reference to the subject proposed to be considered, and I should hope that you will give them that careful consideration which the importance of the matter demands. I am the more anxious that you should, inasmuch as, through your instrumentality, even in the capacity of literary teachers —agricultural progress may be very greatly promoted. Few under-

stand better than I do the position in which the intelligent and well-conducted teacher stands in the estimation of the parents of the children committed to his care, as I was a teacher myself. Therefore, I would say, that the teacher can exercise a very important influence over the inhabitants of the neighbourhood in which he is placed, both by affording them good advice, and by setting them a proper example. And should he be able, by his labours in this way, to improve their social condition, and with it their domestic comforts, he will enjoy, at least, the true gratification, not only of having discharged his duties faithfully to the commissioners, who have provided him with a suitable agricultural education, but also of having been the means of alleviating the misery and wretchedness of his fellow-countrymen.—It may be the case that some of you may yet be employed in the capacity of ordinary agricultural teachers; others of you may aspire to a higher grade, and receive a more practical training; others of you, again, though still literary teachers, may find it advantageous to rent a few acres of land for the benefit of your respective families; and still further, the time may not be far distant when the landed proprietors will find it their interest to attach a few acres of land to the schools scattered over their estates, as example farms; in any of which cases the course of instruction in agricultural matters, which you are about to receive, will prove highly serviceable, and the reward for your labour will be of a more substantial character than that before referred to; it will consist, at least in part, of the produce of your little farms, which will render you less dependent upon others for the means of subsistence, and consequently, make you more happy and contented.

CUTHILL ON THE POTATO.

The Potato is a native of the sea-side; it is found on the coasts of Peru and Mexico, New Zealand, &c. &c. When ripe it is like a ball of flour, rich in starch, although small in size. For a long time after it was introduced into this country it was left in the ground summer and winter, not being taken up unless wanted. In time we found that we could eat more of this tuber; we also found that they were liked by pigs and cattle; we began to use them more freely. We also discovered the plan of taking them up out of the ground when ripe, and putting them carefully away in rooms or lofts; in time our crops increased so that we could not find room in-doors for them, and we at last pitted them out of doors; this may not be more than 70 years ago. This plan of wintering the Potato was the commencement of its ruin; the increase of crops by manures was so abundant that no means was left untried that might still increase them; but strange to say, we still left them to grow in large heaps, covered

thickly with straw and mould, and even thatched with a still heavier great coat, stopping all perspiration from escaping. The consequences of such management soon showed themselves; the Potatoes heated, sweated, and afterwards began to grow; so that when the spring arrives they are found all matted together, their very life's-blood being extracted from them; they are taken out and pulled to pieces, and what nature has placed inside them for their own support is extracted and pulled away from them before planting; they are then cut into eyes, and if the Potato be a large one we have the inside left; this is given to the pigs, not even allowing a fair proportion to the eye; we dust the wounded and exhausted parts over with lime; we have our land prepared at great expense and much care, to receive this already half killed tuber, or part of one; it is planted, but before it can grow it must fill its empty cells with water, the starch, gluten, and other matter having been sweated and grown out of it. It grows; but how? Why with a watery, Balsam-like stem, that when it is squeezed the water runs out of it. Can people wonder, then, when unfavourable weather comes on, that such a plant cannot stand it? When the plant has grown for a time, and produced tubers—some perhaps nearly ripe, while others are in a rapid state of growth—dull rainy weather prevails for a week or so; after this the sun breaks out in all its vigour upon the earth; the plant is so full of water that evaporation and elaboration is stopped, the stomates or breathing pores—small hairy vessels which admit the gases and the air to elaborate the sap—get stopped, so that the moisture which the plant does not want cannot evaporate. This being the case, the whole plant gets confused, the poisonous sap ferments, the circulation still continues, away go the tubers that are not ripe, those that happen to be nearly ripe suffer less, on account of the flow of sap being finished. The Potato, like all other plants, if mismanaged, must suffer less or more, and the more especially if the weather is favourable to such diseases. All plants are liable to mildew, according to their kind.

In order to bring back this much abused, but most useful and splendid vegetable to its orginal health, we must consider the climate from which it comes (and like the Lisianthus Russellianus, which has baffled the skill of the best gardeners to keep and grow, we must look into its natural and native treatment.) The Potato, then, being a native of the sea coasts of Peru and Mexico, where a large amount of salt spray must be deposited at all times, the air much impregnated with the saline gases, if this is so, then we ought to use much salt and no strong manures whatever. Much has been said and written about autumn-planting in this country. If the system which I have practised for the last 22 years cannot be followed out, then let autumn-planting be strictly followed out, only let the Potatoes be well *greened* until

they are quite dark, the skin then gets so tough that no insect can touch it; but the tubers must be planted whole when the eyes begin to grow. They then grow slowly, forming a woody stem, as they do in their native country. This first woody formation never leaves the stem, even to its very top; the vessels are contracted and small; they contain much less water, as is the case in their native country; and it is a well known fact, that the Potatoes on the coast of Peru have a dry resting season, there being no rain whatever for several weeks.—This may be called their winter, but here, when planted, unprepared for the winter's rain and cold damp earth, it is quite a different thing altogether. And then, again, what manures do they get in their native state? None but salt-water spray and virgin mould; clearly showing that if we want to preserve the Potato we must take its native situation as our guide, foregoing all rich and stimulating manures, and be contented with a much smaller crop, but with a much finer flavour, and richer in starch. The Potato is like all other plants or animals, overgorging or overfeeding tends always to disease, and should unfavourable circumstances occur diseases must break out. We blame everything but ourselves as having been the cause of it; one thing is certain, the poorer the land, the more woody the stem of the Potato, the less luxuriant in foliage, and the smaller the crop. But one Potato rich in starch is worth three watery ones for food; in fact, a Potato without starch is worthless even for pigs.

I have practised my system now for 22 years; I first discovered it, as it were, by accident, when at Viscount Canterbury's, in Essex.—The foreman came one wet day and said that the Potatoes in the loft were sprouting, that they wanted picking over. A thought struck me, when I saw them, that if they were put into 3-inch pots they would come earlier than by picking the sprouts then off; it was an early round sort. Some one or two thousand were potted, and kept in an empty vinery; they were planted under the south wall, and they came in very early, beating those in the frames. This was the commencement of my plan of greening and wintering, which I have followed ever since; neither have I cut a whole Potato since. I have many hundreds of letters by me thanking me for my pamphlets, some of them from persons who cultivate many acres of Potatoes. I have just had one from a person in Northamptonshire, saying that he grew 8 acres, all sound, and that he was clearing 22*l.* per acre, after all railway expenses were paid, besides saving enough seed to plant 12 acres next year, while all those around him were diseased, and the same sort too (Regents,) all carefully wintered as laid down in my pamphlet. One thing we ought never to forget—if a thing can be well done on a small scale, it can also be done on a large one; if not, do not do it at all. *James Cuthill, Camberwell.*

Some New Plants lately sent out in Europe.

Cissus discolor. This magnificent new variegated plant is a native of Java, and has been recently introduced to this country by the Messrs. Rollissons' of Tooting. It was the admiration of every one who saw it at the Chiswick and Regent's Park exhibitions during last summer, and it has been awarded several medals. The foliage is singularly beautiful. It is a climbing evergreen stove plant, with leaves about seven inches long and three broad, their under sides being of a beautiful reddish-purple; their upper parts richly veined with red, purple, and white, so as to be very striking, producing a fine effect in a stove or Orchid-house. Two fine plants of it were at Messrs. Rollissons' a few weeks ago; they were growing in pots, and trained against the end wall of a stove, in which the charming effect of the foliage was all that could be desired; and this, being an evergreen species, makes it more valuable, as of course it retains its beautiful leaves during winter as well as summer; and during the dull months we want some of these beautiful variegated plants to decorate our stoves. It is of tolerably easy culture, and grows well in a pot, or planted out in the stove. The way in which Messrs. R. treat it is as follows:—It is grown in a pot with good drainage, the soil consists of light turfy loam and peat, adding some leaf mould in equal parts, with some silver sand, and mixing all well together. If it is grown in a large pot, three inches of drainage are given, with rough peat or moss on the top to keep the mould from stopping up the interstices of the crocks, which is very detrimental to all plants. If they have not good drainage, so that the water can pass off quickly, they will not thrive. The pot is then filled up with mould, and the plant placed about half an inch below the rim. Afterwards a gentle watering is given to settle the mould, and the plant is placed at the hottest part of the house, and always kept shaded when the sun is powerful, which keeps the foliage of a much better color. When grown in a pot it should be trained round some sticks, or round a trellis, or against a wall; it also looks well up the rafters of a house. After the plant has done growing, which will be about November, allow it a season of rest, by keeping it rather dry at the roots, only giving just water enough to keep it a little moist till it is time to start it into growth, which is about February; then more water may be given, but not too much at first, until it roots freely, when it may have a good supply. *B. S. Williams, in Turner's Florist, Fruitist, and Gar. Mis.*

Aeschynanthus splendidus. Lucombe, Pince & Co. have lately sent out this beautiful hybrid. It bears clusters of fiery-red colored flowers, numbering from 8 to 10 on each plant, producing a striking effect.

Plectanthus concolor picta is a new variegated plant advertised by

the Messrs. Low, of Clapton. It is a hothouse plant, with tender, pale green leaves, prettily blotched with deep brown.

Cochlearia acaulis, or winter Violet grass, is also a new thing shown in London. If sown in an American border, or similar place, it grows and blooms from this season up to Christmas. A little patch of it taken up and put in a saucer in water, will also keep flowering a long time, rendering it an interesting plant for the drawing room window.

Fuchsia princeps. The Gardeners' Chronicle says of this: "That must be a very fine florist's flower that would induce us to notice it in our editorial colums * * but we feel obliged to bring forward as prominently as possible a new Fuchsia in the way of Corallina, the beauty of which we can scarcely find adequate language to describe. Flowers of the deepest rose color, three inches long, with a deep purple corolla, stamens projecting an inch beyond the flower, the slender pale pink stalk of which is from 2 to 3 inches long: such is a single blossom. Every twig is loaded with from 3 to 7 of these gorgeous flowers, so that the branches are forced downwards by the weight which they are unable to support. Add to this that the leaves are firm, deep green, with bright reddish stalks, and that the young wood is of the same color, and the mind may conceive what a magnificent effect is produced by this variety, what has been well named Fuchsia princeps by Messrs. Lucombe & Pince, of Exeter, the raisers of it."

Hexacentris mysorensis. An extraordinary and beautiful new climber, requiring the temperature of a stove or warm greenhouse, perfectly distinct in its character from anything yet introduced. It is a most abundant bloomer, producing its long pendulous clusters of large golden yellow and deep crimson flowers in great abundance, continuing in perfection for several months. The habit of the plant is excellent, with neat dark green foliage, and is of easy culture. A plant of first-rate quality and great beauty, sent out by Messrs. Veitch, of Exeter.

Cultivation of the Neapolitan Violet.—In the early part of May, I take the plants from the cold frames or house, shake the whole of the soil from the roots, and divide them according to their size; large plants will divide very well into three, the small ones into two plants. These are then planted out on an east or west border in rows one foot apart, and the same distance from plant to plant, taking care the border is well dug and highly manured with well decomposed hot-bed manure, or rotten cow-dung, which last I find of great service to them. After planting they must be well watered, and should the summer months prove very dry and hot, they will require to be well and frequently supplied with manure water, for if the plants do not grow

strong at that season they are very liable to be attacked by the red spider, and will produce small flowers, with little or no perfume; they will also be longer before they flower. I let them remain in the beds to the middle or latter end of September, as they will not improve much after that time; they are then taken up with a little sand adhering to the roots, and potted, each plant in a six inch pot, filled with a compost consisting of equal portions of sandy loam, well decomposed tree leaves, and, if attainable, very rotten cow-dung; if not, rotten dung from an old hot bed, or, what is better still, bone dust; the pots must be well drained, and I find charcoal the best material for that purpose; by no means use peat soil. When potted they should be well watered, after which I place them in a situation well exposed to the sun, air, and light, and keep all the runners picked clean off as they appear, as I find they injure the plants if allowed to remain. I also keep all the dead leaves picked off. About the middle or latter end of October they should be placed in a frame or pit, nearly filled with old tan, or any dry material, without heat, bringing them to within 3 or 4 inches of the glass, as that is of great importance, for if they are plunged deeper in the bed, they are liable to damp off in the winter months in bad weather, and I find if the foliage is bad the flowers are bad also. During the winter they require little or no water, at least I never give them any till I see them flag, taking care then not to wet the foliage, for that should be kept dry, or they will lose it by damp. Air should be admitted freely at all times; when favorable, a covering must also be used to exclude frost from them, as that is very injurious to their flowering. By the above treatment my plants have produced me great quantities of large and strong-scented blossoms. If Violets are required later in the season than those in frames will last in flower, by a little good management they may be obtained nearly in every month of the year: my method is to take up part of my plants in July and August, and plant in a south border, in beds, the soil of which is prepared for them of equal parts of light loam, well rotted dung and river sand, carefully avoiding peat, as I have, in some instances known it to destroy the whole of the plants; they are planted from a foot to 15 inches each way, and, if it is required, well watered; the runners and dead leaves are all picked off as they appear, and the soil of the beds kept well stirred with a Dutch hoe; at the latter end of October the beds are hooped over, for the purpose of sheltering them in bad weather, with mats. By following the above mode of treatment this favorite plant blooms with me abundantly, and I can confidently recommend it.—*G. Young, in Gar. Rec.*

The Trustees of Amherst (Mass.) College have appointed Wm. S. Clark, Professor of Analytical and Agricultural Chemistry, and Rev. John A. Nash Instructor in Agriculture.

The Florist and Horticultural Journal.

The remark of our correspondent "Anthophilus," that gardeners do not make their actions agree with their talk; that they do not show what they can do here, but prefer talking of what they have done at home, deserves very serious consideration on the part of those to whom it is addressed. Men in any station of life, who talk instead of acting—who say a great deal about how a thing should be done, yet do nothing—are sure never to get along. It must be so with gardeners; with very few exceptions they are all foreigners—English, Scotch, Irish, Dutch, French and German—each with their own notions of how things should be grown; and all of them, we suppose, come over here from the overstocked labor market of the old world, to make a living, and if possible, more than a living, in their new home. We say, we suppose they come to make this living; but as some of them are more inclined to tell of the wonders of gardening skill in the old world than to reproduce these wonders here, we are led to the opinion either that they don't care to exert themselves here, when they may be assured they will go behind in place of succeeding; or, we must suppose that they are very inferior specimens of foreign gardeners, and are not able to grow these very fine plants we hear them talk of.

But we know that this last is not the case; we have good gardeners here—first rate gardeners—men who would stand high among the head gardeners even in England, where John Bull's long purse has collected the best talent in every profession; and we want those men to come forward and *do*, to overcome what obstacles they have to contend with, and to show their employers and all who take an interest in these things, how great things they can do here under the American sky, in American houses, for the American horticultural public. They have made this country their home, and they must keep up with the progressive spirit of the people they live among. The best and most proper description they can give of the splendid specimen plants which they have seen, or they have grown at home, would be to stage such plants (or as near like them as they can) on the tables of our horticultural societies, and then we will have faith in their ability—for seeing is better than hearing. Many object that they have not facilities for doing this;—very well; we say, do what you can; don't make up your mind, with your hands in your pockets, that you can't do it, and go on talking about the specimen Pelargoniums and the "Chrysanthemums five feet through," and the Heaths, and so on, which you have seen at Chiswick, or at the Edinboro' botanic, but work and keep quiet, while others try.

And, above all, when you see other gardeners doing their best, and showing what they have of plants, because they have more energy than you, don't stand by and disparage their work and sneer at it, but go to work like men and beat it if you can; and then like men also, you will be satisfied with your victory, and will not plume yourself upon an advantage gained over one of less skill.

We have good gardeners here; we say it willingly, for we are proud of them, and are friendly to those who have come among us to gain their livelihood by the exercise of the skill which they have acquired in the establishments of their native countries; but we want deeds, not boasting—and we want to see Philadelphia, New York, Boston, Baltimore and Albany coming up to the work, and competing for the prize of skill. Let us see in the coming year what can be done in this matter, and we will have fair reports of all that will be exhibited at the principal points of the country. And if, as we hope, the men for whose benefit prizes at horticultural exhibitions are offered, come up to the work and show what they know, we shall have no more talk of "Paddies" from any country.

The last received "Gardener's Chronicle," (Nov. 20,) contains several articles of interest. First—a notice of an introduction by M. Lamare-Picquot, who was sent out by the French government about six years ago to procure some of the dried fruits used by the Indians of North America as a substitute for the Potato, which was then threatened with extermination. He procured a leguminous plant, with tuberous roots, which turned out to be the Psoralea esculenta. M. Lamare-P. modestly gave it the name of the Picquotiane.

Analysis proved it to abound in farinaceous matter; and in its native state it was very hardy, and not affected either by wet or long dryness. But the experiments of the French cultivators have not proved successful. It cannot be multiplied to advantage by tubers, nor in an agricultural way by cuttings, so that the only way of increasing is by seed; but here we are stopped by the fact that but a small proportion of the cultivated plants produce seed. The editor of the "Chronicle" however, is of opinion that in the hands of experienced gardeners it may succeed.

Signor Gasparrini, Professor of Botany, at Naples, is anxious to sell his herbarium of Phanerogamous and Croytogamous plants, containing about 8000 species, arranged according to the natural system. The price asked is somewhat more than eight hundred dollars.

Mr. Fortune contributes a notice of one of his introductions, the Skimmia japonica, a hardy evergreen dwarf bush, with handsome bright red berries. To this gentleman we owe the introduction of

Weigela rosea, a very handsome spring blooming shrub, with rosy pink blossoms; and of another hardy plant, the Forsythia viridissima, with very dark green leaves and charming yellow flowers; both are now well known in the neighborhood of our large cities.

The "Chronicle" is translating an article on the impossibility of predicting the weather, written by M. Arago, for the "Flore des Serres et des jardins de l'Europe," a most valuable work published at Ghent.

James Cuthill, of Camberwell, the most intelligent writer on root growing whose productions we see, and whose article on the Potato we copy into our present number, contributes an article on keeping roots and on growing winter vegetables. He deprecates the keeping roots intended for the table, dry, as they become tough, and require soaking. He recommends keeping the crop in the ground until wanted for use; such is the custom of the London market gardeners.

The Entomological article is on the common dust moth, *Agrotis segetum*, the caterpillar of which attacks turnip crops, doing great damage. In our new volume we hope to receive valuable original contributions on this science.

An account is given of the progress of the great Crystal Palace in its new quarters at Sydenham. Sir Joseph Paxton, with his skill in hydraulics, will make a magnificent show of fountains and cascades. The Park contains three hundred acres. Messrs. Loddiges' plants are already secured for the Company, and it is reported that 50,000 scarlet Geraniums have been contracted for, for bedding purposes. The collection of trees will, no doubt, be very splendid; and landscape gardening will be displayed to the greatest advantage.

In London, there are, in round numbers, about 240,000 fat oxen, 1,500,000 sheep and lambs, 30,000 calves, and 40,000 swine annually slaughtered.

A remark has been made in our pages, that gardeners generally seemed to consider all names of plants feminine. There does seem to be a great confusion of ideas with regard to the proper termination of adjective names; but how it is to be mended without making all gardeners moderately good Latin and Greek scholars, we know not. The merely mechanical rule, that the terminations of generic and specific names should be the same, will answer in most cases; but there are instances where it will not do, as in some names of Greek derivation, and some Latin names ending in *us* are feminine, as Citrus, which must have medica; the pomegranate is called Punica granatum, the generic and specific names of which are both nouns, Granatum being the Latin name of the fruit, as also Punica, as we learn from Columella, 'Mala dulcia granata, quæ Punica vocantur,' 'sweet many seeded

apples, which are called Punica,' a name given on account of its red color, *Pomum puniceum* being Ovid's name for it; nevertheless, we think that Punicum granatum would have been more grammatical, pomum being understood. To begin at the beginning, nurserymen's catalogues should, as far as possible, be correct in this matter, as the names are made known in many cases through them, and their errors (if there be any) become established. The European catalogues are as a rule correct in their nomenclature; that is, those of the large establishments; but even in the "Gardener's Chronicte" we find advertisements written with as little regard to grammar as the most unlearned of us could be guilty of. In one advertisement we find *Mimulus spectatissimus*, *pulchellum*, and *majestica*, Geranium aurantiaca, and in another G. marginata.

Names of Greek derivation are not generally well defined in their genders, for instance *Clerodendron* is neuter, and the adjective should end in *um*; but Centropogon is masculine, and requires the specific adjective to be in *us*. Agalmyla is feminine, Ceratrostemma and Brachystelma are neuter; Aeschynanthus, which has assumed a Latin termination, should be neuter. But the subject is full of difficulties, unless every one, as we said before, has a classical education, which cannot be reached by many men, and would not do them much good if they did acquire it. But if the names were rightly written in the first place, we should become accustomed to their sound, and thus give them their proper terminations. But we must not try too many reforms at a time, or our friends the gardeners will get out of patience with us.

Floating Melon Beds in the Vale of Cashmere.

We extract the following account of these, given by an English traveller, Mr. Moorcroft, from the "*Revue Horticole.*"

"The lakes of the valley of Cashmere are in general shallow and full of a vigorous aquatic vegetation, consisting of Nymphæas, of Iris, of reeds of every description; and as boats are obliged to pass over them frequently, they follow certain passages which are like opened roads, where the navigation is not impeded. The intervening spaces are made profitable by the country people of the neighborhood, who have set about cultivating there melons and cucumbers. To effect this, armed with a sort of scythe, they cut the aquatic plants about eighteen inches in depth, so as to sever all connection with the soil, and then keep them up so as to make a kind of thick floating raft about six feet wide and of various lengths. When these rafts are constructed, they cut the tops of the plants which are above the level, and spread on the top the mud which they get from the bottom of the

marsh, and which, penetrating between the stalks and interlaced leaves of all these plants, serves to bind them and to make a surface, which hardens still more when covered with a bed of rushes. The next thing is to make these artificial islands stationary; the cultivators do this by thrusting in at equal distances stalks of willow, sufficiently deep to resist the force of the winds—an arrangement which permits these floating masses to rise and fall with the water of the lake. With fresh grasses, they form along the whole length of the rafts conical heaps about a foot and a half high, and as large at the base, and hollowed at the top into a kind of nest, which they fill with the mud from the bottom of the lake, and which they generally mix with wood ashes; then planting commences. The cultivator takes young plants of melons and cucumbers, which he has in readiness; he puts three in each heap, and abandons them to themselves."

Moorcroft, and after him another traveller who has passed through the valley of Cashmere, assures us that they have never seen in Europe so vigorous and productive plantations of melons and cucumbers. The gathering is done like the planting, in boats, in which they go around the beds. These beds are generally strong enough to bear the weight of the man whose business it is to gather the produce. This mode of culture is not confined to Cashmere; it is also found in China. In that country each cultivator possesses his raft, numbered, which he moors to the bank, and which he launches into the middle of the lakes or of the ponds, after having deposited his young plants of melons or of water melons, which he tends and gathers by drawing to the banks the little floating islands which bear them. This Chinese culture is very rational, they know how much need of water melons have at their period of full growth, and they understand how their young roots, in continual contact with the water into which they penetrate, serve to give the plants uncommon vigor. This mode, then, very simple as is evident, is in harmony with what we know of the vegetation of melons, and of the functions of roots. *Naudin*.

Humboldt in his "Aspects of Nature," says of the valley of Cashmere, "the delightfulness of its climate is considerably impaired by four months of snow in the streets of Sirinagur, its principal city.—

* * * The beauty of its vegetation has from the earliest times been very differently described, according as the visitor came from the rich and luxuriant vegetation of India, or from the northern regions of Turkestan, Samarcand and Ferghana."

GARDEN MEMORANDA.

Dryburgh's, Logan Square. Mr. Dryburgh has been established a long time, and he is already surrounded by buildings. His speciality is the furnishing of cut flowers; and here we may see in the present,

which is the bouquet season, very extensive arrangements for furnishing bouquets and floral ornaments for balls. One range of glass is devoted to Camellias, where are collected many fine plants for sale, as well as to furnish the most valuable of ball room ornaments. In another house are planted in the ground, back of the stage, the Abutilon striatum, yielding a large supply of its graceful flowers.—The stage is filled with Poinsettia pulcherrima, with its striking whoil of scarlet leaves. Another house was filled with Stevia serrata, whose tiny white flowers are so useful to the bouquet maker; in another place are hundreds of heliotropes, of mignonette, of Epiphylla, &c. Several large houses are devoted to roses, of which Mr. Dryburgh has a large and excellent collection. The ground in cultivation is large and is filled with roses, vines and other hardy plants cultivated for sale. We omitted to mention the acacias, of which there are some very large specimens.

R. Kilvington's, Schuylkill Third near Vine St. Mr. Kilvington has in his houses very many fine specimens of stove and greenhouse plants, including most of the standard plants used in the decoration of conservatories and windows, together with many novelties. His collection of Exotic ferns is very extensive and well worth a visit. Mr. K. is well known as an enthusiastic botanist, and in his garden is to be found the only collection of cultivated indigenous plants in this city. In spring and summer the lovers of "wild things" and the botanist may find many beautiful and rare plants. The bouquets from this nursery are well known to all who admire flowers.

All those gentlemen who have money and taste enough to keep up gardens, and who employ gardeners, cannot be sufficiently careful in doing their part of the work; that is, in providing all things which are necessary for carrying on gardening operations. It is of great importance that the workman should have the concurrence of his employer in all his schemes, but it is also a great matter that he should have every facility for doing his work, whether in tools, material, or assistance. An incomplete or inferior set of garden tools—want of proper arrangements for storing them when not in use—of proper facilities for potting and training plants, or insufficiency of soils or of pots, and of many other details of horticulture, must needs be very discouraging to the spirited gardener, who wishes to do his best, and make his place worthy of his skill. These things are in many cases not sufficiently thought of. A gentleman may have a place—he has perhaps a fair collection of plants; they have been neglected by a sham-gardener; when this one is providentially removed, the owner looks around for a new one, or applies to a nurseryman, who sends him one well versed in his profession; the first business is to set mat-

ters to rights, this requires time and patience and labor, for undoing bad work is harder than to begin afresh; but if the new comer finds the tools spoilt and others lost, so that he has double difficulties to contend with, he becomes discouraged and perhaps settles down into a jog-trot and just "gets along." So we say to the amateur, see at the start that the place is well furnished with tools; your gardener if worth anything, will keep them in order, but to do this properly, he must have a tool house, where he can put them away in a dry clean place; he should also have a neat convenient potting shed where shifting could be done, and soils and pots kept, and unpacking attended to without causing a litter in the houses. Where a gardener finds his work appreciated, and sufficiently noticed by his employer, he will feel encouraged to renewed exertion; but it is so often the case that his best skill receives a mechanical "very pretty," that he must often wonder why people have gardens at all. We wish to do our best to increase the taste for horticultural pursuits, and to this end we would have people put themselves in the way of learning more about plants. The best means of doing this is to attend the meetings of horticultural societies, where flowers and fruits are exhibited, and talked about; and as we have a well established and respectable society here, all who wish to improve their opportunities should become members of it. At each monthly meeting is a fine display of various plants, and fruits and vegetables, and a certain amount of information is to be gained by attending to the proceedings. The society also possesses a fine horticultural library; the opportunity of reading this is sufficient inducement for the payment of the small sum required of members.

Pennsylvania Poultry Society.

This Society held its exhibition lately on the lot next the High school, running from Thirteenth to Juniper street. The coops were placed under canvass, and very many persons visited the show during the three days it continued, although Friday was a very wet one.

About fifteen hundred fowls were exhibited by Dr. James M'Clintock, the President of the Society, Samuel C. Radford, Dr. James T. Crabbe, David Davis and R. A. Smith, of West Philadelphia; Reuben Hagy and Samuel A. Bumstead, Roxborough; Harmon Osler, William Chancellor, L. Wister, R. Fraley, Germantown; Richard Cartwright, North Penn; F. G. Wolbert, Frankford; Peter Barker, Penn District; Stacy Wilson, Kensington; William Leonard, Dr. H. J. Brown, George Simler and William Krouse, Philadelphia city; and Aaron Clement, John B. Perry, John Simler, R. Wister, Jr., and James Killen, Philadelphia county; Dr. D. L. Heist, Blue Bell, Montgomery county, and John S. Lippincott, Mount Holly, N. J.

The collection embraced the pure Irish and Japanese Game Fowls;

buff and white Shanghais, grey Shanghais, Chittagongs, Silver Greys, Seabright and Black Bantams, Cochin China, Pheasants, Bolton Greys, Dorkings and water fowls. The Shanghai chickens were of the Marsh, Perley, Forbes, Gillespie and other stocks; there were also some fowls of the Bramah Pootra breed; blue Turkeys, &c., &c.—There were also several contributions of Pigeons of a very superior quality.

We regard the whole exhibition as eminently successful, and we think the Society must be, as they undoubtedly are, entirely satisfied with their first effort. The good feeling shown by the different exhibitors, was not the least agreeable part of the whole, and will materially contribute to the future prosperity of the society. Some were of course dissatisfied with all the decisions of the committees; but this only proved the high quality of the fowls, and the interest which the different exhibitors feel in the influence of such displays. Fowls were sold on the ground at from $5 per pair, up to $50 for a cock and two hens; and indeed, many who went to the show as mere lookers on in Vienna, returned home the owner of a beautiful pair of fowls, and their pocket books minus twenty-five or thirty dollars.

The Award of Premiums.—The following is the award of the different judges appointed for that purpose:

For Shanghai or Cochin China, over one year old, a First Premium was awarded to J. S. Lippincott, J. B. Perry and Dr. James M'Clintock. The Second Premium was awarded to Robert Purvis, M. W. Heston, Dr. M'Clintock and William Leonard.

Shanghais under one year old—First Premium to James Gillespie. Second Premium to Robert Purvis and Doctor James M'Clintock.—Third Premium to R. H. Smith, J. M. Williams and S. C. Radford.

Special Premium to Dr. James M'Clintock for 6 pullets; R. H. Smith, 1 stag and 4 pullets; J. W. Williams, 1 stag and 2 pullets; M. Kauffman, 2 stags; Dr. James T. Crabbe, 1 pair 5 months old.

White Shanghais—First Premium to Harmon Osler. Second Premium to W. W Clarke. Special Premium to S. A. Bumstead and R. Fraley.

Grey Shanghais or Chittagongs—First Premium to R. Fraley.—Second Premium to Dr. J. M'Clintock. Third Premium to Aaron Clement.

Black Spanish—First Premium to Dr. H. J. Brown. Second Premium to G. Drayton.

Black Polands, over one year—First Premium to William Leonard. Second Premium to M. Crouse. Under one year—First Premium to Samuel Radford. Second Premium to R. Wister.

Dung Hill—First Premium to Stacy Wilson, (cross of the Chittagong and common Fowl.)

Capons—First Premium to J. S. Lippincott.

The Premium for the best and largest collection was awarded to Dr J. M'Clintock.

Pigeons—Blue Croppers—First Premium to John B. Perry.—White Rough Necks—First Premium to P. Barker. Buff Carriers—First Premium to B. Kneass.

Turkeys—First Premium to Aaron Clement. Second Premium to James Gillispie. Special Premium to S. C. Radford for a gobbler.

Geese—White Bremens—First Premium to M. Crouse.

Musk Ducks—Very superior—First Premium to L. Wister. The White Ducks of William Leonard and John M'Gowan, are of equal quality. Common Ducks—First Premium to S. C. Radford.

Guinea Fowls—First Premium to Reuben Hagy. Second Premium to William Leonard.

Bolton Greys—First Premium to Dr. M'Clintock.

Game—First Premium to L. Wister. Second Premium to F. G. Wolbert.

Black Bantams—First Premium to Dr. M'Clintock.

Seabrights—First Premium to L. Wister.

We are glad to see that the Shanghai and Cochin China fowls are classed together in the above awards. They are undoubtedly the same.

Before we close this notice, we will give the weight of a few of the heaviest fowls on the ground, in order that the general reader may have a correct knowledge of this important quality in the improved fowls. Harman Osler, of this borough, had a pair of White Shanghais—cock and hen—which weighed 20 pounds, the hen weighing 9 pounds, and was the heaviest on the ground. J. S. Lippincott had a pair of yellow Shanghais which weighed 19¼ pounds, the cock weighing 11¼ pounds, which was the heaviest exhibited. Robert Purvis had a pair weighing 18 pounds; William Leonard 18¾, and Dr. M'Clintock 18½. There were also several others approaching very closely this weight.

From the success of the first attempt of this Society, formed only two months ago, we anticipate the exhibition of next year, if held in the Museum Building, as it probably will be, to far transcend even that of the present year, though unexpectedly large in numbers and variety and excellent in quality. *Germ. Tel.*

To Correspondents.—J. McD., Pensacola. Your pitcher plant is the Sarracenia Drummondii, a very handsome species. We wrote to you a few days ago. We would be glad to exchange seeds with you.

Nemesis. We are fully aware of the causes of complaint, but we don't wish to acknowledge the existence of the paper you mention. The catalogue you mention is the most accurate one in this country, except, perhaps, some which were printed at the office of the Florist, but we don't mean to say that these were better.

Erratum. Page 275, for "Whoever desires a remedy," read "Whoever discovers."

THE

PHILADELPHIA FLORIST

AND

HORTICULTURAL JOURNAL,

A MAGAZINE OF

Horticulture, Botany, Agriculture, and the Kindred Sciences.

Edited and Published by R. ROBINSON SCOTT, No. 63 Walnut Street, between Second and Dock Streets, up stairs.

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OUR NEW VOLUME.

As early in January as we are able, will appear the second volume of the "FLORIST AND HORTICULTURAL JOURNAL." As we will have many difficulties to contend with, the most formidable of which will be the fact of our publishing a three dollar Magazine at two dollars, we hope that all who wish to see Philadelphia in the right place in the literary department of Horticulture, as she always has been in every other department, will come forward and help us. It is not enough that our friends, numerous as they are, subscribe: they must induce their friends and their friends' friends to subscribe; we want to obtain a footing, and then we trust we shall show that we deserve to be sustained. The late Commodore Decatur, being complimented on one occasion for his bravery and success, replied, "that any of the officers in the American Navy could have done the same thing, if they had a chance; and that all a brave man wanted to distinguish himself was opportunity." Now we want an opportunity, and it can only be had by our obtaining a good circulation among those who will appreciate and encourage our endeavors.

In order to make our Magazine as attractive as possible, we have been at a great deal of trouble and expense in procuring the best plates which are anywhere attainable; most of them will be executed for us in Europe—those which we have done in this country will be gotten up as artistically and as faithfully as possible. In one of our earliest numbers we will give a picture of a Philadelphia seedling Camellia, acknowledged to be one of the best ever raised in this city, so famous for its fine varieties of that elegant flower.

Among our contributors will be several of the most able scientific men of the present day—we need only mention the names of Prof. Haldeman, Dr. W. D. Brinckle and John Cassin, Esq., as evidence of the high standing our magazine will take. Our practical contributors have already proved themselves; among them are some of the most able horticulturists in the north and the south, and we hope that our magazine will be an authority upon all matters of horticulture in the United States. Native botany will receive a fair share of our attention, whereby we hope to awaken an interest in our too much neglected Flora. In this department we have been promised the assistance of several botanists of reputation. Our calendar will be continued by the same able contributors who have furnished that of the present year. The editorial department will be conducted carefully yet independently; our European communications will be of much value. Hoping to receive the encouragement, not only of this city and neighbourhood, but of the entire union, we will do our utmost to deserve success.

THE CYCLAMEN.

Few winter flowering plants are more useful than the varieties of this charming genus. Strong, healthy specimens produce a plentiful succession of their singularly formed blossoms, which, if guarded from damp, will remain for several weeks together in perfection. All the varieties are compact in growth, of easy culture, and hence they are well suited for persons whose accommodation is limited, or whose knowledge of plant cultivation is not great. Those about to add a few varieties to their collection cannot purchase them at a better season than the present; for if sound healthy plants are obtained now, there will be no risk of their decaying (instead of starting into growth) as frequently happens with plants that have been kept quite dry during the summer.

Good healthy plants procured now will probably have commenced growth, and should be kept rather close for a week, when it will be advisable to examine the state of the roots, and, if well furnished, shift into pots a size larger; otherwise repair the drainage, and defer shifting until the roots indicate a want of pot room; and then a moderate shift only should be given. At this season the plants should be placed near the glass, and should receive a sufficient supply of water to keep the soil in a nice moist healthy condition. Provided frost is excluded, the temperature in which they are grown is of little consequence, except where plants are wanted in flower without loss of time; and as the blossoms appear before the foliage is well developed, there will be little difficulty in securing these at any period from November to

April. Keeping the plants cool and rather dry will retard their blossoms until March, and placing them in a temperature of from 45° to 50° will bring them into full beauty in a very short time. The plants may be kept in a cold pit, where they will be safe from the frost, until they commence flowering, and then they should be removed to a sitting room window, where, with care to protect them from currents of cold air, they will be quite at home, and will be beautiful objects for some two monshs; the best situation, however, for Cyclamens, while growing and in flower, is near the glass in a greenhouse or pit, where the temperature may average from 40° to 50°, and where air can be admitted without its passing over the plants, as is the case in most siting room windows.

It is a too common practice to treat Cyclamens with neglect directly the beauty of the flowers is over, and to give them little attention, and sometimes hardly a drop of water until the following autumn, when they are wanted in flower. This is the very reverse of what they require, and annually occasions the loss of many bulbs. The plants should be allowed a light airy situation in the greenhouse or pit, and kept properly supplied with water until May, when they may be removed to a shady situation out of doors; and when the leaves decay, very little water need be given until it is desired to excite the plants into growth; the soil, however, should never be allowed to become quite dry. My own practice is to plunge the pots in coal ashes during the summer, which in case of long continued droughts, are watered, so as to afford a little moisture to the soil in the pots. The plants should be moved to the greenhouse in September, and surface-dressed or potted as may be necessary.

Propagation is more readily effected by seeds than by any other method, for although large bulbs occasionally produce several crowns, there is considerable risk in separating them, as decay is apt to follow the track of the knife. Seeds, however, soon grow into useful plants. They should be collected when ripe, and sown in well drained pots, filled with a mixture of loam, leaf soil and sharp sand, and set in a safe situation till autumn. They germinate soonest by placing the pots in September in a temperature of about 50°, taking care to keep the soil well supplied with water. If well looked after during winter, they will be nice little plants towards April, and may be potted singly in five inch pots, taking care not to injure the roots in separating the plants. They should be placed in a close shady situation until established in their pots, and then set in a light airy part of the greenhouse. When the weather becomes warm and settled, they may be planted in raised beds of prepared soil on a warm border; and during summer will require no further attention than an occasional watering in case

of the soil getting dry, which, however, will seldom occur. In September, take them up with as little injury as possible to the roots, and treat them during the winter and spring as recommended for old plants. If managed in the same manner the second summer they will be good sized bulbs, and will afford an abundance of blossoms the following winter.

Two parts fresh, turfy, friable loam, to one of turfy peat or decayed leaves, with a liberal mixture of sharp sand, form a suitable compost for the Cyclamen.—ALPHA. *Gard. Chron.*

GIANT TREES OF TASMANIA.

The Boabab of Senegal (Adansonia digitata) the Cypress of Oaxaca, (Taxodium distichum) and the famous Chestnut tree of Etna, have often been cited as the giants of the vegetable kingdom. If we must believe a late number of the "Botanic Gazette," of London, all these sovereigns will be dethroned, and reduced to the second rank by those which have just been discovered in Tasmania, and which leave far behind them those ancient monuments of nature. Here is what a traveller says of them, in a letter addressed to the above Journal:

"Last week, I went to see two of the largest trees which exist in the world—if, indeed, they are not the largest which have been meaured up to this time. Both are situated by the side of a little stream which is tributary to North-west Bay river, behind Mount Wellington, and are of the species which is called here Swamp gum; but I do not know their botanical name. I read in the "London Journal of Botany," that Mr. Hooker, describing the new species of Eucalyptus, gives the name of *gigantea* to the species whose astringent bark furnishes tan to the colony; but this name *gigantea* is more fit, on all accounts, for the *Swamp gum*, which exceeds considerably in size and form the tree described by Mr. Hooker, as can be judged by the following measurements, which I obtained, along with five other persons who accompanied me on the excursion. One of these trees was standing, the other was thrown upon the ground, a circumstance which enabled us to measure it exactly. We found 220 feet from the base of the trunk to the first branch, then from this point to the extremity of what remained of the stalk, for it had been broken, and had become already rotten, we measured still 64 feet; that is to say, in all 284 ft. so that before its top was broken, the tree certainly exceeded 300 ft. At the base of the trunk we found 30 feet of diameter, and 12 feet at the first branch, or at 220 feet high. This single portion of this colossal tree would give, in my opinion, more timber than the largest oak mentioned by Loudon in his treatise on trees, even including all

its branches. By a sufficiently near calculation we estimated its total weight at 440 tons.

The tree which is still standing grows yet strongly, without the least symptom of weakness, and resembles an immense tower, which rises in the midst of humble Sassafras*—humble, at least, in comparison. It measures, at 3 feet from the ground, 102 feet in circumference, and immediately at its base 130 feet! The density of the forest deprived us of the means of estimating even approximatively its height, which must be enormous. Less than 120 feet distance from it, I measured a third tree, which at 3 feet from the ground was 60 ft. in girth, and at 130 feet, the point of starting of the first branch, it must still have had, judging by the eye, at least 40 feet of circumference; it was really a prodigious tree. I am convinced that in the space of a square mile in this locality, could be found at least a hundred trees of the same species as the former, whose trunks would not be less than 40 feet round."

These are certainly fine trees, and the theorists who dream of nothing but of the acclimatisation of exotic races on the soil of France, will not fail to cry that the Swamp gums are a precious acquisition to make for aboriculture. That is possible, but when we think that these enormous plants have required probably several thousand years to attain the size which makes all their merit, we acknowledge that we are discouraged, and that we find it much more easy to go to these places to bring trees already grown, than to sow seeds of which even our grand children will not even gather the produce. This system is less brilliant, less scientific, but it is surer and more expeditious. Those industrious persons understand this, who for a long time have explored with profit the old American forests, and have furnished Europe with immense quantities of excellent wood, which, on the whole, does not come dearer than that of our native trees. NAUDIN,

(In the "*Revue Horticole.*")

* This name is applied here to a large tree of the family of Monimiaceæ, *Doryphora Sassafras.*

Effect of Electricity on Hops.

The abbé Berthollon, a distinguished agriculturist, was the first to prove that the hop received a healthful influence from atmospheric electricity. Thus, the crop has been very abundant in our country in the years of frequent storms, accompanied with thunder. The English, profiting by this observation of Berthollon, cultivate it on iron rods, which replace the poles and vine props, as being a better conductor of electricity.

This upright is 35 feet high, and is bound to others like it by double

cross-ties, some on top, others below, fastened by screws, so that the hop trellis presents the appearance of a very solid frame, which the wind cannot overturn, which the weight of the crop cannot bend, and whose numerous points, directed towards the sky, establish along the vegetable stalks currents of electric fluid, the benefit of which experience has proved.—*Flore des Serres et des jardines de l'Europe.*

Messrs. Editors :—Having seen a good deal of "blowing" in the pages of the "Florist" about foreign gardeners, about plant growing, and casting reflections on what they had seen and done in the old country, in growing Chrysanthemums five feet in diameter, and fine Heath's, and so on. Now, Messrs. Editors, I will ask you a few simple questions with regard to plant growing here and in the old country. In the first place, can you inform me who has a fine collection of Cape Ericas in this country ;—secondly, has any gentleman or nurseryman ever devoted a proper place to grow them in. I think not. You, sirs, are most likely well aware that in the old country heath-growers have a place set apart for growing them, whether on a large or a small scale. I know that several gentlemen in and around Philadelphia have imported Cape Ericas; as soon as they arrive they put them in the greenhouse, and most likely most of them die ;—immediately the cry is, the climate will not suit them, or else the poor gardener is blamed for not knowing how to manage them. But to manage Heaths in a greenhouse is a very difficult task, either here or in the old country.

Now, sirs, what I would recommend for a fair trial of Heath growing, and for the foreign gardeners to gain a reputation in this great country, would be the following simple method :

Choose a north or a north-east aspect, and dig out about 18 inches of soil; build a brick wall, say 12 feet long, 6 feet wide, 4 feet 6 inches in the back, and 2 feet 6 in front, and leave behind and in front of each light a square hole about 6 or 8 inches from the ground, with a sliding door to cover it, so as to give the plants a free current of air; and in fine weather also tilt up the lights. In the summer season the plants may be plunged in ashes, but give a good drainage with rough cinders, so that the air may circulate freely at the bottom of the pots. Heaths in general require to be watered freely and regularly ; if left to get dry, or too wet, the foliage is apt to turn brown and to drop off. Water very sparingly in winter, and give all air possible, to keep your pit dry and to prevent mildew. With regard to the cold—to keep the frost out is all that a Heath requires ; they will thrive better and keep a beautiful green foliage.

The following is a list of good showy varieties:

elegans,
eximia,
Lambertia rosea,
retorta major,
geminiflora,
Banksia alba,
Bowieana
Hartwellii,
odora rosea,
Albertus,
ampullacea,
Cavendishii,
hybrida,
hyemalis,
aristata,
Juliana,
delecta,
depressa,
tricolor,
ventricosa superba,
Linnæides superba,
vernix coccinea,

And now, if some of our good Philadelphians will come out and give the foreign gardeners a chance of displaying their skill and of staging their handiwork in the Chinese Museum, we may hope perhaps to see another Chiswick. EXPERIMENT.

RETROSPECTIVE CRITICISM

The Pelargonium. How very much astonished some of our lady friends are at hearing a new name for their old favorites; but with the new name they got a new flower, and a very handsome flower it is. With such regularity of petal, in the new varieties rivalling old Hooper's Pansies, with such splendour of colour, with such handsome foliage, it must needs arrest the attention of every one. And when we arrive at more perfection in growing them, we may hope to see very fine specimens. There is one obstacle we have to contend with, which is, the difficulty of importing them; like all other soft wooded plants they will not bear a long voyage; out of eight fine varieties we saw arrive here in twenty-days (from nursery to greenhouse) from London, only one survived; and they were not young plants, but had strong woody stocks. It has been recommended to cut in plants and pack and send them as soon as they break out, others recommend packing in powdered charcoal. We wish some of your contributors would give their experience in the matter.

Management of Window Plants. We are glad to see this subject still receiving your attention; for nothing is more pleasant than to see windows full of beautiful flowers; especially on cold days when our noses are freezing, and nothing is to be seen but hard pavements and bare trees, as we have no evergreens in town. Ivy might be run up our trees in the streets, but perhaps the boys and b'hoys, to

show that this is a free country, would pull it down. It certainly is one of the evidences of our entire liberty, that a person cannot keep an orchard or a fruit tree in any accessible place, on account of the depredations committed upon them. We saw two magnificent chestnut trees cut down this summer, at a gentleman's suburban residence to save his vinery from destruction by clubs and stones; another family in the same neighbourhood lose a large part of their garden when these nuts are ripe, because they dare not go near the trees for the same reason; and we heard of a gentleman's being obliged to cut down a fine pear orchard, because he could not protect it. But we are wandering from the windows. It is not likely that persons who have no other facilities than windows and yards will grow heaths, neither do we suppose that Stenocarpus will become a window plant; at least it would require a church window to flower it in. Bulbs and succulents are perhaps the best for room culture as they are most easily managed and as you remarked before, are cleanest.

Native Plants. Your correspondent should receive the help of some of the many plant collectors whom we have in Philadelphia and its vicinity; but there seem to be very few who think indigenous plants worthy of cultivation; we hope to see that mended; if they could go to England or to Scotland and see our *weeds* in cultivation, they would come back perhaps with a better opinion of them.

Mildew on Grapes. "Quot homines tot sententiæ," the east wind may be more hurtful to the vine than any other, but we would say that it was not because it was the east wind, but because in this neighbourhood it frequently brings a cold rain with it. Leaving an open space between the laps of the glass would be rather apt to cause a great deal of drip.

The Chrysanthemum. We certainly had a good show of these beautiful flowers at the November exhibition of the Pennsylvania Horticultural Society, although the exhibitors seemed to be labouring under the disadvantage of mixing pompones with large sorts. We venture to suggest that the number of plants in a pot should be defined; and a premium given for the best plant on a single stem; also that the large sorts and pompones should be separated. We will add to the list given by your correspondent, the following as fine, Augustinus, Bergeronette, Veleda, Marie Vouzel, Hendersonii, Solfaterre, Asmodee, and La Fiancee, pompones; and Osiris, Rossini, Queen of England, among the large sorts.

Model Farms. "What a vast amount has been written" about model farms and yet we have but two in this country. There seem to be some things, to learn which, people imagine it is unnecessary to go to school. To tell a countryman that in town we go to school to

learn to ride, to the gymnasium to learn to work, seems to him remarkable; and his opinion of learning farming out of books is not a very favourable on. But a model farm where scientific instruction is combined with practice must needs be an excellent school for the son of the farmer, and for the city boy, who has a mind to lead a more healthy life than his brothers.

Foreign Trees in Landscape Gardening. Although our own trees do not receive the honor due them in their own country, we must say that we agree with Mr. Meehan, that in constructing a landscape we must use what best serves our purpose without asking any narrow-minded questions about its origin. The rare beauty and adaptiveness to ornamental gardening of many of the newly introduced evergreens is acknowledged by every one of taste.

Looking at your editorial in connection with the clergyman's advertisement, which you copy from the Gardener's Chronicle, we are reminded of the very great difference between what a gardener expects to do in this country and in Great Britain. The advertisement seems to us here, rather farcical; but it was inserted in the columns of the most respectable horticultural journal in England. We would like to see the man professing to be a gardener here, who would milk a cow or do general house work; we have heard of their taking care of a horse, but we recollect in one instance, the horse was exercised to the neglect of the garden. No one here expects a gardener to wash off the pavements, or to do work which generally falls to the lot of the house servants; but it would seem that in England they do a great many things which they are unwilling to do here. Our opinion of the matter is this, that if a gentleman wishes to have a good garden, and plant houses, he should get a *good* gardener; and if the gardener is industrious, he will find quite enough to do in taking care of his department; nevertheless, we think that a gardener loses nothing by accomodating his master in such things as are of little moment to him, but which may save much expense in keeping up a place.

Achievements of Horticulture.—Contrasting the upright conservatories (whose large brick pillars excluded the light) of twenty years ago, with the light and graceful span-roofed or curvilinear structures of the present day: and the few orange trees, and laurustinus and oleanders (we beg their pardons, *Neriums*) with the graceful, rare and curious inhabitants of our houses now, we may indeed say that great things have been achieved. But, far as we have advanced, we have still a great way to go; in science, especially in naturalscience, there is no perfection, there is always a future stretching away before the explorer, always something new. What is new to-day, will be familiar on the morrow, and difficulties present themselves only to be

overcome. Our country is now taking her part in the improvements of scientific gardening and agriculture: inventing some machines, adapting and improving others, we advance along with the old world, having the benefit of its experience, and quickening it by our young, fresh energy.

The Cineraria.—We hope that the Philadelphians are coming out this year with their specimens of these plants, so that the best collection shown in our exhibitions shall not again be from a stranger, as was the case last spring: although the prizes are open to all the world, yet it does not seem right to let ourselves be beaten on our own ground.

Luculia gratissima.—We sincerely hope that our cultivators will try again with this beautiful plant, and succeed in placing it among the lists of plants which can be grown in this country. We hear of such splendid plants of it, in England and Scotland, grown in vineries and Camellia houses, that it does not appear difficult to manage. We fear that the judicious system of letting alone has not been tried in its case; it has perhaps, like many other good things, been nursed to death.

Repose of Plants.—It is a pity that amateurs do not study more the sciences connected with plant growing; they would then be able to understand more the reasons of certain systems of horticulture, and perhaps to assist, with the theoretical knowledge they may acquire, the practical experience of the gardener. A gentleman, especially if he lives in the country, should know something about everything that goes on under his direction, so as not to be at the mercy of his subordinates—a good general should know how to load a cannon, as well as to plan a battle, and the more perfect any one is in the detail of his business, the better his whole work will be. As for the repose of plants, many persons who cultivate, think that they have nothing to do but to grow, else why put them into greenhouses, and protect them from frost. If all work and no play don't suit Jack, all work and no rest will kill plants.

The Hollyhock is beginning in England to receive a great deal of attention, and we hope to see some of Chater's best sorts shown here; they are much undervalued here, as we have none of the fine ones in common cultivation; but we are rustic enough to admire even the ordinary single ones which are to be seen reaching above the white pale fence of our farm house "posy patches." We have as yet only heard of the new varieties, but if they can beat the large double straw coloured one which is grown around Philadelphia, we should like to see them.

New and Rare Plants. It is a very good idea to have notices of all the new things which are introduced here, as many things supposed

new, have been found by the introducer to have been almost under their noses for a long time. A gentleman who imported Balsamina latifolia alba, this fall, while lamenting over the dying appearance of his plant, was astonished at finding a good stock of it at the nearest nursery. The Croweas are a very desirable genus of plants, on account of their beauty and their long bloom. Ipomæa ficifolia—A splendid bloomer. We saw two large plants of it this fall, which were one mass of flowers for several months. It can also be made to bloom well in the winter season; the plants have been in the possession of the present owner about three years.

James Cuthill, of Camberwell, seems to be one of the most constant and the most reliable of the correspondents of the Gardener's Chronicle. His excellent practice, founded on strong common sense, has made him an oracle among the root growers of England. A man of moderate information, who has courage and patience to try experiments and note the result, can generally learn something which will become useful to himself and others.

It is rather a dangerous matter to meddle with the gardeners. We think you will find before long that you have said something which you will hear from. But we will endorse what you say, as far as some gardeners are concerned, and no doubt your friend "Anthophilus," whom Dr. Lindley would call "Anthophil," will break a lance on your side. When you are unhorsed by the practicals, we shall expect to hear his "*au secours*," followed by an effectual charge.

We hope that after your admonition, those "gentlemen who have money and taste enough to have gardens," will not leave their gardeners in the position of the Israelites, when required to make brick without straw. That "getting along" is observable too often in gentlemen's places, and is frequently the fault of the want of proper interest on the part of the proprietor.

Messrs. Editors—Allow me at the beginning of my letter to correct an error which was made in my last, the writing of Cymbidium for Calopogon. The Cymbidia are, I believe, generally tropical species, although I have seen the names used as synonomous in herbaria collected in this neighbourhood. In one herbarium which I have lately had the pleasure of looking over, I saw fine specimens of Orchis spectabile, Orchis (Platanthera) fimbriata, cristata, and of six or seven other species of this beautiful order, which were collected in the neighbouring parts of New Jersey.

The spring blooming plants of our fields and forests are remarkably beautiful. Beginning with the *Hepatica*, which is about the first flower in bloom, and the very many species of Violets, some of them, *Viola pedata*, with such large flowers; the wood Anemone, (*A. nemorosa*)

or wind flower; the charming *Houstonia* or Bluets, better known in this neighbourhood by the name of "Quaker lady;" the *Ranunculus* whose yellow cups dot the meadows with gold; *Epigæa repens*, or Trailing Arbutus, with its fragrant rosy flowers. We have a continued succession during April and May of tiny beauties, which precede and accompany the blossoming of the fruit and forest trees. A collection of these early blooming plants may easily be made in your native bed, or even in a out-of-the-way corner of a grass plot. The violet among grass is very pretty, and has lately been introduced into Washington Square—in spring the blue flowers are the admiration of the promenaders in Walnut street.

It is to be regretted, that with all the beautiful tastes for music, for painting, and other refined and graceful arts which are so assidously instilled into the minds of our young ladies, their confinement to the city does not permit them to become familiar with the beauty of the fields; that regard for the requirements of fashion, and the hothouse education of this country, forbids the blooming cheek and luxuriant figure of the farmer's daughter to the city belle; as a distinguished German professor remarked to a gentleman of this city, "I do not understand your American woman, they are so scrawny." This was not intended for their ears, but they certainly do not compare in luxuriant health to the light haired "frauen" of Germany, nor with the more robust beauties of England. That this is owing to the want of country life and out of door exercise, is not to be doubted; that "God made the country, and man made the town" is evinced by the difference in the sturdiness of the farmer and of the mechanic, as well as in the paler faces and more slender figures of our city ladies. Many of these latter would be shocked at having the redundancy of waist of the milk-maid, but the increased enjoyment of health would compensate for possessing a figure more nearly resembling that of the Penelope in the Academy, than of the model of the Parisian dressmaker; besides this, as, to a sensible man, a stout sandal, or an india rubber shoe, is more beautiful on a lady's foot than the tiniest gaiter; so the bloom of health would be more appreciated than the utmost waxen delicacy of complexion, which the exclusion of sun light and fresh air could give.

I am gratified to receive the approbation of one, whom I know as one of the best horticulturists, as well as an enthusiastic admirer of native plants—I refer to your correspondent, "Anthophilus," *who I wish would assume my place in advocating their culture.

PHILARVENSIS.

*A un bon chat un bon rat. Diav.

All roots should be excluded from the light during the winter, and kept in as low a temperature as can be made convenient without danger of freezing.

CALENDAR OF OPERATIONS,

Written by Practical Gardeners, for the Philadelphia Florist.

FRUIT.

Grapes.—Having previously alluded to the formation of a border for growing grapes, a few remarks upon the kind of structure adapted for the growth of the vine, and setting out the plants may not be inapropriate. With regard to the structure, experience proves that a span, or curvilinear-roofed house set north and south, is best suited to this latitude. Single-roofed houses with their fronts facing the south are much more difficult to manage. The intensity of the sun's rays on a summer day, striking directly on a large sheet of glass, raises the temperature and evaporates moisture to such an extent, as to render it a matter of extreme difficulty to secure a proper atmosphere for vegetable existence. A prevailing error also, in *lean-to* houses, is in having the roof too flat, so that the rays of the sun strike perpendicularly upon it. These objections are obviated in a great measure in double-roofed houses, when the end of the structure faces the south. It is not necessary, however, to use a compass in laying out the site, as a few degrees east or west is practically unimportant. Many would-be-gardeners endeavor to throw an air of mystery and intricacy over everything connected with horticulture, and we cannot forbear a smile, (in our shirt sleeves) when we see one of these architects laying off a grapery, with all the appurtenances of a land surveyor. Unless for external effect, the less parapet wall the better; indeed, it would be preferable for the plants if the glass embraced the ground. We would like to see some improvement in structures devoted exclusively to the culture of the foreign grape. We are of opinion that training the vines close up to the glass, and allowing the fruit to hang down clear of the foliage, is not the most natural method, exposing as it does the fruit to all the vicissitudes of temperature. It is an established fact that mildew is the greatest enemy to the growth of the foreign grape in this climate. Also, that this disease arises chiefly if not entirely from aridity in the atmosphere. The grape is a hardy plant, at least we have seen them endure a cold of 8° below zero of Fahrenheit's scale, and grow as well the following summer as those protected in houses. In fact, the principal *necessity* for growing them under glass is to secure facilities for giving them a sufficiently moist atmosphere. Perhaps there are some kinds, such as the Muscats, that would not ripen properly without a little artificial aid, but in favorable localities out of doors we have seen many varieties, such as, Zinfindal, Black Hamburgh, White Frontignan, Tokay, Sweetwater, and Golden Chasselas, ripen perfectly. So that it is neither from the intensity of the cold in win-

ter, nor the want of heat in summer that they have to be grown under glass. We question, whether as a general thing they would withstand the extremes of sun and frost during winter, as those mentioned above were under peculiar circumstances, but by laying them close to the ground and covering with leaves they would remain uninjured. But the berries of these high flavored fruits are thin skinned and their delicate tissues are injured by the aridity of our clear climate in summer. Our observation leads us to believe that the fruit would be less likely to be acted upon by the atmosphere were the plants trained perpendicularly, that the foliage might to a certain extent protect the fruit. As houses are at present constructed this system of training can only be partially adopted, as the upright available space gradually diminishes towards the sides. But by raising the sides to an equal height of ten feet all round, and forming the roof with a series of small spans laid on horizontal rafters, the highest part not exceeding twelve feet, a much more convenient perpendicular space would be available, the plants could be set out in lines trained to upright trellises, or stout branches of trees might be inserted and the vine allowed to twine in a somewhat natural manner, a suitable atmospheric humidity would be easier preserved in a house of this description, and more fruit would be produced in a given space than in ordinarily constructed houses. Those who are in the habit of picking off leaves for the purpose of letting in light to color the fruit, will probably object to this mode of training, but any person who has gathered strawberries will remember that they found the richest and best colored fruit hid among the foliage.

For planting we prefer one year old plants that have been raised from eyes, and made a good growth. Older plants from being confined in comparatively small pots, will generally be found to have their roots twisted and cramped, and in consequence do not grow away so rapidly as younger ones. Indeed, the best season's growth we ever saw was on a plant raised from an eye the same year. Having procured plants from a reliable source, (this is important) cut them down to three buds, and prepare for planting about the beginning of April. Have in readiness a light compost, the principal ingredient of which is leaf mould, to lay in immediate contract with the roots, after carefully disengaging and laying them evenly out. Plant inside the house; this has nothing to do with the extent of the border, as the house should be built so as the roots have access underneath the walls, unless the house is large enough to allow sufficient extent of border inside, which is decidedly preferable. As to sorts it is much a matter of taste. We would, however, plant freely of Regal Muscadine, White and Black Frontignan, Tripoli, Black Hamburgh, Esperion and Victoria. The Muscat should be planted at one end by them-

selves as they require a different treatment from some of the others. We allude to the Cannonhall Muscat, and Muscat of Alexandria.— We are rather in advance with these remarks, but it is well to be prepared in time, so that half the summer does not slip over before the plants are set out

Gooseberries and Currants. The former of these, like the Foreign grape, is liable to be attacked by mildew, consequently their cultivation is rather neglected. There are some excellent varieties, however, that do well. In pruning, leave as much young wood of last year's growth as convenient, taking care not to overcrowd the bush. Do not shorten the points of the wood retained. We have observed that the fruit produced from vigorous young wood will be less mildewed than that proceeding from spurs on older growths. Black currants should be pruned in a similar manner, leaving the young wood to produce the crop, and cutting out old wood to keep the bush regulated. Red and white currants require the young wood to be spurred close down to within an inch of the stem; the leading shoot may not be so closely cut until the plant attains the desired size. The wood of all these bushes should be annually undergoing renewal, by cutting out old wood and encouraging young in its place. Put in a few cuttings of the best varieties. Select stout shoots about one foot in length; smooth the base with a sharp knife, immediately below a bud, and cut all the buds clean out except three or four at top. Insert about four inches of the cutting in the soil, from which, more particularly, the buds should be extracted, otherwise they will continually give annoyance by sending up numerous suckers.

Forcing. Strawberries in pots may now be introduced into a slight heat; they can be ripened by the middle of April in a greenhouse; they require to be on a shelf near the glass at the top of the house. Some have small structures appropriated to the forcing of these and other fruits. The "Golden Rule" in forcing is, *never to be in a hurry.* Imitate as far as possible the various changes of the natural atmosphere, and above all things avoid creating a mid-day temperature at mid-night. We do not advocate sudden and extreme fluctuations of temperature, but allow a diminution during the night, varying from 10 to 20 deg. below that of day. S. B.

Flower Garden. I am very glad to see the "Florist" advocating attention to our hardy native plants. Where flowers are grown on lawns or in particular situations merely for effect, each kind will of course have to be grown in masses; but in every garden there will be situations where a collection of hardy plants will not be out of character, but will rather afford a fund of permanent enjoyment to those who do not gaze on a mass of flowers as a child does on a butterfly or a rainbow, for the beauty or harmony of its colors, but for the

varied forms of nature, as exhibited in each bud or blossom. Those who have decided on commencing a collection of these interesting plants, will watch the first opportunity of obtaining their roots from the woods or nurseries, and to aid them in making out their lists I append the names of some of the handsomest, with their times of flowering:

April.

Dodecatheon Meadia,
Phlox subulata,
Primula veris,
Hepatica triloba,
Corydalis cucullata,
Polemonium reptans,
Viola odorata,
Pulmonaria virginica,
Anemone pulsatilla,
Alyssum saxatile,
Gentiana acaulis,
Omphalodes verna,
Saxifraga crassifolia,
Dielytra spectabilis.

May.

Aquilegia canadensis,
Pæonia tenuifolia,
Pentstemon atropurpurea,
Convallaria majalis,
Jeffersonia diphylla,
Iris sibirica,
Phlox suaveolens,
" maculata,
Hesperis matronalis,
Lupinus polyphyllus,
Saponaria ocymoides,
Orobus niger.

June.

Aconitum napellus,
Lychnis fulgens,
Campanula persicifolia,
Pæonia Pottsii,
" Whitleyii,
" fragrans,
Cypripedium pubescens,
Iris susiana,
Pentstemon speciosum,
Campanula ranunculoides,
Clematis erecta,
Asphodelus ramosus.

July.

Dictamnus fraxinella,
" alba
Monarda didyma,
Delphinium speciosum,
Pentstemon digitalis,
Hibiscus palustris,
Chelone barbata,
Lythrum latifolium,
Dracocephalum grandiflorum,
Potentilla Russelliana,
Campanula carpatica,
Anchusa officinalis.

August.

Lobelia cardinalis,
Hemerocallis japonica,
Asclepias tuberosa,
Veronica carnea,
Lythrum salicaria,
Campanula pyramidalis,
Corydalis formosa,
Phlox carnea,
" paniculata,
Epilobium angustifolium,
Yucca filamentosa,
Liatris squarrosa.

SEPTEMBER AND OCTOBER.

Aster macrophyllus,	Eupatorium cælestinum,
Gerardia flava,	" aromaticum,
Lobelia siphilitica,	Echinops Ritro,
Gentiana saponaria,	Chelone glabra,
Solidago glanca,	Bupthalmium fruticosum,
Aster cordata,	Liatris elegans.

GREENHOUSE.—The most interesting tribe of plants at this season of the year is undoubtedly the *Camellia*. The buds frequently drop off before flowering; this may spring from three causes—from the plants being kept too dry, or from the drainage being bad, whereby the soil becomes sodden; or from the house being kept too warm by insufficient ventilation. As the leaf buds burst the plants are benefitted by occasional syringings, and indeed an increased supply of water altogether, in order to accommodate the demands of the young growth.

Australian and Cape plants are the chief ornaments of the greenhouse at this time. The *Acacia*, amongst the principal, will, like the Camellia, require more water while flowering; indeed, most plants which produce flowers before they make a new growth, require more water as they flower. On the other hand, most plants which flower on the young wood at or near the completion of its growth, take less.—The *Correa* is another beautiful tribe, but does not do well in most collections; it is generally grown in a peaty soil; I observe that where it seems to succeed well, the growers use a considerable portion of loam in their compost for it. This is consistent with my own experience, and I am inclined to the opinion that more loam should be used with the peat for hard-wooded plants than is generally done in this country. As soon as any Cape or hard-wooded plant has ceased to flower, it should be repotted, if it require it; many prefer waiting till the plants are placed in summer quarters before this is done, and some in the fall. I prefer before they commence to grow, whatever the season may be, as the roots being then in their most active state immediately penetrate the new soil, and before it becomes sour or sodden by frequent waterings, reap whatever advantages the air it contains when fresh may afford them. Some greenhouses are rendered very gay in February and March by having young plants of *Verbenas*, *Petunias*, and other bedding-out plants potted at this time into large pots, and encouraged to grow.

Hyacinths that have been out of doors, or in any reserve place for protection, may be brought in a few weeks before wanted; they should not have much heat, light or moisture for a few days, and then give them gradually. *Carnations* and *Pinks* are much admired when grown in pots and flowered there early; they do not force well if much

warmth be given, but the usual temperature of the greenhouse will bring them forward a month before they can be had out of doors; whenever the roots make their appearance through the bottom of the pots, they should be shifted into a size larger. They require very little water and love the light, and whatever manures are used to enrich the soil should be thoroughly rotten. The *Pansy*, on the other hand, delights in half-rotten, strawy manure, and turfy loam. If a quantity of seedlings have been raised in the fall, they will require potting this month; they do not flower well here when the weather becomes warm; but when grown in pots and forwarded slightly by the aid of a cool frame, they do very well.

The *Cinerarias* will be soon the chief attraction; the least frost kills them, yet they will not do well if kept in a high temperature. They love moisture, yet are very impatient of damp. No plant is more improved by the use of charcoal in potting than this. This plant bids fair to become more popular than ever, as supplying a very early spring want. The *Calceolaria* will require the same conditions as the Cineraria.

Pelargoniums become "drawn," spindly, and worthless, if they are not allowed to occupy the lightest and most airy part of the house. If fine specimens are desired, the shoots should now be tied down to the surface of the pots and pinched off so as to induce them to shoot freely; but avoid a too frequent use of the "finger and thumb"—nothing renders a Pelargonium weaker, rather encourage them to *grow* bushy, by the free use of light air, and manure water. A good supply of young *Fuchsias* should be coming on now—repot as their roots fill each pot, let them not want for moisture or light, do not pinch off their tops, but let them grow rapidly. The temperature in which they are grown should not exceed 55°. A turfy loam, moderately enriched with well decayed manure and well drained with charcoal suits them admirably. The *Mimulus* is receiving more attention than it has been—where they are grown they are much improved by having pans of water kept under their pots. *Oranges* and *lemons* will require the coolest part of the house, and to receive no more water than will just keep them fresh. *Epiphyllums* as they continue to flower will require the warmest end of the house, and a fair supply of moisture. *Cacti* and *succulent* plants generally will scarcely require water at all, unless in very dry situations, and then receive but a slight sprinkling with a syringe. The rule "when you water a plant at all, let it soak right through" does not by any means hold good with these plants, if there be not some other good exceptions.

Vegetable Garden. Very little can be done now in this depart-

ment except by way of preparation for another year. Manure can be placed on the ground wherever required, and *asparagus* beds, if not already done, should have a slight covering of it. Bean poles, pea brush, and stakes of all kinds should be got now, the tool house gone over, and put in order, and everything kept in good order and studiously in its place. When the season of operations commences there will then be nothing to hold back our attention. Where there can be a heat of 60° commanded *Bush Beans* can be easily grown in pots, and can be gathered in two months from the time of sowing. If there is an abundance of leaves or manure at command, and small frames, beds may be put up for early spring salads at the end of the month. *Radishes* and *Lettuce* are however very impatient of too much heat—they will come on well if the temperature be kept at 45°. When it goes above that the sashes should be lifted entirely off. The same remarks apply to the *Potato*, and the *early Horn Carrot*. *Cauliflowers* in frames require all the air possible. Never allow them to become dry, this is the cause of many failures by way of "buttoning off." T. J.

The Aerial Roots of Orchids of the Tropics.

(From a Paper by Dr. W. H. de Vriese, Reg. Bot. Prof., Leyden.)

The so-called Orchids do not, like true parasitic plants (as Viscum, Loranthus, Rafflesia, Balanophora, Rhopalocnemis,) subsist on the sap of the plants to which they are attached, and in which they take root; but on the nourishment they gather from the atmosphere in which they extend, or spread out their generally silver white roots. Hence botanists have given them the name of air-roots, in opposition to others which grow in the ground. Such are to be found among the genera Aërides, Vanda, Saccolabium, of the damp and hot parts of India; Schomburgkia, of the woods of Honduras and Guiana; the superb Lælias of South America; the many-formed Epidendrum of the South American islands; the beautiful and sweet smelling Stanhopeas, &c.

In the cultivation of these plants, the natural means of growth must be imitated as near as possible. If they be treated as terrestrial Orchids, a failure will be the result. These grow under quite different circumstances. It is worthy of remark, that a peculiar apparatus is required to promote the growth of each of these sorts of plants.

The air-roots of the parasitic Orchids of the tropics have a formation quite peculiar to them. We shall endeavour to point out its chief characteristics. It may serve, if need be, to show the intimate connection between theory and practice. The roots which penetrate the ground, and thence derive their necessary sustenance, are com-

posed of cells. The cells of those air-roots possess a thin transparent membrane, and contain mucilage with all those particles, the presence of which in the cavities has been ascertained by microscopic and chemical observation. They are nitrogenous particles, dextrine, sugar, all dissolved with mucilage in water. The absorbent organs are chiefly the outermost and tenderest cells. They are of great consequence to the plant. By the action of endosmose they absorb from the ground water and divers earthy particles, so far as they are soluble in water, and the nature of those particles and of the membrane of the cells permit their admission into the cavity of the cell. Besides, they take up particles which are produced by decomposition of animal substances, and the remains of vegetables in the ground.—The latest researches prove most satisfactorily, that with the water which is in the ground, several salts, of lime, potash, soda, and even salts of metals, as well as gases, carbonic acid, ammonia, are taken into the plant, by means of the peculiarly formed extremities of the roots, which are called spongioles, in the cells of which are never found either incrustation or openings; and which, notwithstanding the absence of the latter, are, however, perfectly pervious. The surface of the root branches does not absorb any liquid, nor does the surface of the trunk root itself.

Quite otherwise is the case with the alimentary parts of the so-called air-Orchids. Their exterior is white as snow, dry, the surface smooth, and for the most part not divided or branched; transparent, and more or less sappy only near the point. They grow to a remarkably great length, and rarely attain the thickness of a quill.

If these roots be cut in a cross direction, and the slice carefully examined by the aid of a microscope, a very singular state of the web of the cells will be perceived. What should be called the bark of the root is in this, one would say, a kind of papery tissue, which covers the air-root externally; each cell is literally filled with spiral threads or fibres of an extraordinary fineness. Whereas in the usual web of cells the greatest diameter is in the length of the cell; in this the breadth much exceeds the length. Now, in all other cells of plants, which are exposed to the light and air, we meet with many particles which are considered as the produce of the growth of the plant, united with those of the atmosphere and the light (among which, *e. g.*, the globules of a green color have a principal place); but in these we find the cells quite empty, except of the fibres, which run in all directions, and frequently cross each other. More inwards follows the simple web of the cells, and lastly, the fibrous part of the roots, in the middle of which, again, cells are found. These roots must be, naturally, well calculated to imbibe moisture, which they require in great measure; and, in case they are not continually ex-

posed to it, the membranes quickly lose the power of absorption. The circumstances in which these plants are found in their natural state are particularly favorable, not only for the growth and development of their roots, but also for their power of absorption. We meet with them chiefly in the so-called aboriginal woods of Brazil, the northern parts of South America, India, &c. A high temperature, a great degree of moisture, a damp bottom of mould, continually becoming thicker by the falling of leaves, and always in a state of decomposition, by which many gases, carbonic acid, and ammonia are communicated to the almost undisturbed atmosphere of those woods, constitute the condition that most conduces to the growth of the air-roots, which are thus exposed to all the circumstances that are most favorable to the absorption and changing of substances, which is the only object for the forming of new organs. If we can closely imitate this combination of circumstances in our hothouses, we are certain of success in the cultivation of these beautiful plants. Experience teaches us that low houses are the best. The presence of substances in a state of decomposition and emitting ammonia is also required ; this last is necessary in every collection of plants. Moisture, with a temperature of 66° to 75° Fahrenheit, must be artificially procured, to produce a feeble imitation of what Nature exhibits to us in her great laboratories.

This formation of air-roots is not confined to the group of Orchids ; it is also observed in several other groups of plants, as Arads and Pandaneæ, which, however, in this respect demand a careful investigation.—T. P., *Gard. Chron.*

To the Editor of the Philadelphia Florist.

Sir :—What change has come over the principles of the "Florist," that encourages you to write in such a style about the gardeners who come here from Europe to make a living, and enrich and improve American gardens by bringing with them European style and refinement? If such is to be your principles for the coming year, do not add my name to your new list of subscribers. The reflections made by "Anthophilus," as regards high wages and little to do, "let the employer be satisfied or not, as long as he pays," such is not the sole object looked for by the majority of gardeners in this vast Republic, but the reverse. True, why not remunerate gardeners in proportion to their labor, the same as other tradesmen. In fact, there is no class of men in general so miserably paid for the amount of labour which they have to perform as gardeners. There has been enough on that subject.

F. N.

The Florist and Horticultural Journal.

We expected, when we wrote the editorial in our last number, on the sayings and doings of gardeners, to receive some very severe onslaughts from those who may at first sight deem themselves offended. But to any candid reader of our pages, we put the question, can any gardener who does his duty, feel offended at our blaming those who do not? Our correspondent "Anthophilus" is a gardener, and a foreigner; he is a man who works hard, and is acknowledged by men of judgment here, to be one of the best representatives of his profession in the country.

The matter seems to stand thus: The "Horticulturist," in an editorial article, was very severe on foreign gardeners, mentioning especially "Paddy;" this was followed by "Jeffreys" in the August number, who enlarged upon "imported empirics," "professors," &c., in a very savage way. Our correspondent "Anthophilus" disapproved of calling any one a "Paddy," saying that "if ignorance and vanity can be personified under the name of "Paddy," in his opinion "Paddies" can be found in all quarters of the globe." In our editorial we took up his remark, and suggested that foreign gardeners could readily overcome such prejudices by showing how well things can be done, in place of talking about them; and for this, which every candid man must acknowledge to be a fair statement of the case, we receive the blame of men who do themselves wrong, in classing themselves with those whom the shoe fits. Is the position of a horticultural paper to be this, that no fair statement of anything must be made, but we should pursue a narrow, "piddling" course, in continual fear of treading upon somebody's toes, (and it is astonishing how prevalent corns are,) and thus languish along in respectable inanition? We think not. The gardeners of this city know whether we are favorable to them, or not; and we venture to say that we receive their entire approbation; and when those in other cities know us better, they will acknowledge that we are "a right clever fellow." No change has come over the principles of the "Florist," it stands where it always did, and we hope by a manly course, to merit the respect of both amateurs and gardeners.

H.C.H.

In the "Gardener's Chronicle" of Nov. 27, is an account of the results of experiments by Mr. Ville, of the uses and effects of ammonia in hothouses. Introduced in such small quantities as 4-10,000ths, in eight or ten days, the influence of the gas becomes perceptible, and from that time increases. "Leaves which were in the beginning pale,

become more and more green, and eventually turn almost black; their stalks become long and stiff, and their surface broad and shining. At last when vegetation is over, the crop is found to be much more considerable than in plants growing in pure air: it is also found that weight for weight they contain almost twice as much nitrogen"—thus producing the effects of increasing their growth and of rendering their produce more nitrogenous.

By ammonia we may also modify the vegetation of plants. Added several months before flowering it makes no change in the growth of the plant, except in increased vigour; but if introduced when the plant is about to flower, the flowering is checked and growth induced. These experiments should not be tried in summer, as the plants appear to be damaged, from the fact of the balance between the action of the roots and of the head being destroyed. Roots are generally intended to furnish plants with mineral matters. If such substances are absorbed beyond a certain limit, the plant is unable to use what it receives, and saline inflorescences form on the surface of the leaves. But when the leaves are more active than the roots, organic elements are what are chiefly absorbed: but these elements cannot be assimilated, unless a sufficient quantity of mineral matter is absorbed. Thereupon comes to pass a striking phenomenon; what the roots are unable to supply the plant furnishes from its own stores, and the substance of a certain number of leaves is *resorbed.*

Mr. Fortune is going out to the East Indies, for the purpose of again attempting the introduction of Tea into the Himalayas..

The Gynerium argenteum, or Pampas grass, is attracting much attention in Great Britain. A plant near Dublin threw up forty-seven flower stems twenty feet high. The plant measures nine feet in circumference.

Our Public Squares.

The city councils are at length beginning to think of a little improvement in the arrangement of the trees in the city squares, which are so ornamental and useful to citizens. The dreary nudity of their winter aspect is cheerless and disheartening. The city councils therefore, upon motion, appointed a committee to consult with several horticultural gentlemen as to some change being made in this respect, and the report of the committee recommends the removal of about fifty deciduous trees, and that evergreens be substituted. This is the beginning of improvements, and we trust that when the city councils witness the increased beauty and effect produced, it will encourage them to go a little more into decorative horticulture. Refreshing as

are the squares in summer, so are they gloomy in mid-winter, with their bare and leafless trunks and branches. With the addition of some well-selected Coniferæ, such as Araucarias, choice Pines, Cedars, Cypress, Cryptomeria, Holly, Yew, &c., &c., we may not inaptly repeat the lines of the poet of the lakes and glens:

> "When autumn has stripp'd every leaf from the fountain,
> The more shall Clan Alpine exult in her shade."

R.R.S.

Pennsylvania Horticultural Society.

The stated meeting of this society was held in the usual place on Tuesday evening, 21st inst. The coldness of the season generally prevents much show of flowers at the December meeting. A good collection however, was shown by Thomas Meehan, gardener to Caleb Cope, and twelve Chrysanthemums by Alex. Parker. A plant of the beautiful Centradenia floribunda in good flower was staged by Mr. Cope's gardener, and a design of cut flowers by the same—and a basket by T. Megrahn, gardener to R. Cornelius. Collections of vegetables were shown by Anthony Felton, Jr., and Mr. Cope's and Mr. Cornelius's gardeners. Several dishes of fruit were on the tables. Apples from Mr. Roe, and from T. Megrahn, gardener to R. Cornelius.

Among other matters of interest, a copy of a letter from the President to Commodore Perry, requesting his attention in procuring seeds and bulbs for the Society, was read.

The new schedule was offered and amendments made. A proposition for the appointment of a botanical committee by Dr. A. L. Kennedy came up, and after some debate was referred to a committee consisting of Messrs. Cope, Hancock, and James.

The following premiums were awarded. For the best collection of plants to Thos. Meehan, gardener to Caleb Cope. A special premium for a plant of Centradenia floribunda to the same.

Designs. For the best design to Thos. Meehan, gardener to Caleb Cope—for a basket, a second premium to T. Megrahn, gardener to R. Cornelius.

Pears. First premium to Mrs. J. B. Smith's gardener—second to T. P. James.

Apples. First premium to N. W. Roe—second to T. Megrahn, gardener to R. Cornelius.

A special premium to Mrs. J. B. Smith's gardener, for specimens of Glout Morceau pears.

Vegetables. Best collection by a market gardener, to Anthony Felton, Jr. Best by an amateur to T. Megrahn—second to Thomas Meehan.

A Committee on Botany.

The Pennsylvania Horticultural Society, founded now about twenty-six years, confines its operations, according to its constitution, to the promotion of Horticulture alone: that is, the improvement of plants, fruits, and vegetables. When we say plants, we mean as we suppose the constitution implies, ornamental flowering plants; Botany as a science, is without its sphere of action; yet so closely does the science of Botany connect itself with that of Horticulture that it would require all the care which a *a zealous guardian of the constitution* could bestow to keep it out. It will edge itself in at times. For instance, a great novelty may be brought up at some of the meetings of the Society, set forth as an extraordinary new vegetable, hitherto unknown; perhaps a new spinach from New Zealand, or a new monster beet from California, or a new squash from South America, or Cuba, or somewhere else; and what do the members of the committee know as to its history or character without recourse to botanical science? Questions may arise as to identity of species of two plants competing for a premium, in a collection which if proved to be distinct would ensure for the exhibitor the justly merited premium, but if identical would disqualify. Indigenous plants are however exhibited, but only as ornamental flowers in bouquets and baskets, although we see indigenous plants in pots set forth in the schedule. The Pennsylvania Society has no Herbarium! With all the facilities which the extensive correspondence of its officers ensures, no cabinet of seeds or vegetable products is possessed by it. We hope to see a change in all these important matters, and Dr. Kennedy's motion will be the means.

R.R.S.

Our Monthly Tour of Inspection

There is little to interest the general observer in the out-door department of gardens; at this season the greenhouse and conservatory attract unusual attention. The experienced gardener, furnished with proper means and facilities, is there enabled to produce a few gems to cheer the gloomy aspect of the season.

At James Dundas' we observed a fine specimen of *Cattleya anceps*, or clawed Cattleya, a showy orchid, and one of the most familiar species of this beautiful genus. The extensive collection of exotic ferns to be found here impart a freshness to the houses, and are much admired for their graceful and varied forms.

James Ritchie's houses, of West Kensington, deserve a visit, now that the Camellias are coming into bloom. He is well known as an experienced grower, and has introduced several new hybrids. His

houses contain a choice and varied selection of the most useful plants, and are in a healthy condition; his stock of Roses is choice and extensive, as he spares no pains to procure the best sorts.

H. A. Dreer, 59 Chestnut street, has a neat garden and conservatory in Sixth street near Haverford road, Mantua Village, where he cultivates choice flowers and greenhouse plants. He gives much attention to the supplying of choice bouquets, and has a good selection of flowers for that purpose.

Wm. Hobson may be found on the Darby road, near Leech's; he is a florist, and takes care only to preserve choice sorts. His Carnations, Cinerarias, Tulips, Auriculas, Polyanthus and Dahlias were very choice during the past season. He gives much attention to indigenous Botany and Entomology, and all who are interested in these sciences will find his collection of plants as well as dried specimens in both departments worthy inspection.

HORTCULTURAL PUBLICATIONS.

We have received during the year many periodicals devoted to horticulture and the rural sciences, containing much useful information, and tending to the dissemination of sound principles on matters hitherto too much neglected. Some of the leading magazines connected with our subject did not condescend to visit us. We are indebted to Dr. Warder for some back numbers, but we like everything fresh—we hope it is only an oversight. We have received

Hovey's Magazine of Horticulture, which contains always some valuable communications, especially on fruits. The chapters by "Hortus," on watering, airing, &c., are contributed by a practical man, well versed in the details of his business, and at the same time a clear and intelligent writer; we are favored by some valuable communications from the same source. We also observed a valuable communication on the Botany of Vermont, and regret that there are not more such writers in other States of the Union so rich in native plants. We have read a communication respecting the Victoria Regia, from Mr. Meehan, correcting an error as to the state of growth of the plant into which some persons have fallen. The fact that no bloom of the Victoria was deposited at the September exhibition of the Pennsylvania Horticultural Society from Mr. Cope's plant, gave rise no doubt to this supposition. Mr. Meehan has explained the matter.

The Ohio Cultivator continues to favor its readers with valuable information on agricultural topics. The ladies' department under the charge of Mrs. Bateham is a good feature. The steady character of this periodical has gained for it no doubt a good support.

Rural New Yorker, Rochester, N. Y., is a neat and lively weekly, devoted to agriculture, horticulture, and general education, interspersed with choice articles from the best sources, and is without doubt a valuable and favorite family newspaper.

The Farmer and Artizan, Portland, Maine, is a neatly printed Monthly, generally made up of articles from the leading horticultural and agricultural periodicals, with judicious articles by Marcian Seavey, its editor.

The Pennsylvania Farm Journal reaches us at intervals. The December number has been received—it is now published at West Chester. The last number contains notes by "Viator" of the Woodlands and Bartram's Garden, which will interest the lovers of these favorite haunts.

The Pennsylvania School Journal, Lancaster, Pa., has also been received, and promises to be a valuable aid to those engaged in education, and is carried on with spirit and with valuable communications; but if the teachers cannot make a good periodical who should we expect would. The Hon. T. H. Burrows is editor.

The Southern Cultivator, Columbius, Ga. is devoted to Southern agriculture and horticulture, and is a great assistance to the horticulturists and others of that portion of the Union where it is published.

The Soil of the South, Augusta, Ga., is similar in character and object to the last mentioned, and advocates Southern agricultural rights.

The Farmer's Companion, is the title of a new candidate published at Detroit, Michigan, at fifty cents per year. It is neatly printed, and we hope from the fact that it is a work of love, that it will be supported by all interested. It has a strong editorial troupe and promises well.

The Western Reserve Farmer and Dairyman, is devoted to the agriculture of the western reserve of Ohio, and treats the farmers of the locality to valuable information connected with their operations. It is also one dollar a year, and published at Ashtabula, Jefferson County, Ohio.

The Genessee Farmer, is by far the neatest and best established of cheap agricultural and horticultural periodicals. The volume for 1852 has just been completed, and the horticultural standing of P. Barry, the editor of this department, makes the information contained in it valuable. In his capacity of editor of the "Horticulturist" we hope to be more familiar with his writings.

The Irish Industrial Exhibition will take place in May; a committee has been appointed in this city.

The Brewers and Malsters of the city and county of Philadelphia have issued a circular address to the Farmers of Pennsylvania, urging upon them the advantages of cultivating Barley. They say:

"Within the county of Philadelphia there are annually consumed for the purpose of brewing, about Six Hundred Thousand bushels of Barley, supplied from the State of New York, which has been sold in Albany, its general depot the last three years, at an average price of from Seventy-five to Ninety Cents per Bushel, which, by comparison with the prices of other grains within the corresponding period, has yielded a much larger profit to the cultivator. The demand is continually increasing. About equal quantities of the two and four-row'd are used, and the so-called spring barley is much preferred to the winter grain for malting.

The State of New York now produces an annual average crop of about Two Millions Five Hundred Thousand Bushels, which meets with ready purchasers during the months of September, October and November; but the farmers there, continuing to sow the seed each year of the previous crop on the same land, the quality of the grain is deteriorating; this is of great importance both to the raiser and consumer, as the heaviest, brightest and clearest barley always commands the highest prices and readiest sales in the market.

The present time appears to be a favorable one for the introduction of its culture in our State, and its becoming a staple article in our market, whereby the sum of Five Hundred Thousand Dollars or more, now annually transmitted by the brewers of this city to New York, would be enjoyed by the agriculturalists of our State.

The entire adaptation of the climate and soil of Pennsylvania to the cultivation of barley—the increasing demand in this city, as well as the neighboring ones of New York and Baltimore—the new facilities that are opening for its transportation from all parts of the State to markets where it finds cash purchasers, all unite as strong inducements to agriculturalists to turn their attention to its production.

We have received the first number of the Farm & Garden, a Monthly, made up of selections from the columns of the Agricultor, a paper published weekly by Messrs. A. B. Allen & Co., of New York. It is well gotten up, and furnished with many useful wood cuts and a lithographic frontispiece. The reading matter is valuable and will be found useful to all who are engaged in agricultural and horticultural pursuits,

WANTED, A SITUATION AS GARDENER.—A young man, thoroughly conversant with greenhouse work and forcing, wishes a situation as above. Address "C. E.," care of Wm. Saunders, 577 Baltimore St., Baltimore, Md.

THE

PHILADELPHIA FLORIST

AND

HORTICULTURAL JOURNAL,

A MAGAZINE OF

Horticulture, Botany, Agriculture, and the Kindred Sciences.

Edited and Published by R. ROBINSON SCOTT, No. 63 Walnut Street, between Second and Dock Streets, up stairs.

VOL. I.] PHILADELPHIA. [No. 12.

Foreign Horticultural Establishments.

We do not wish to devote too much space in an American periodical to the description of foreign gardens, or the provisions made by European tradesmen for the gratification of their supporters, for Americans are justly fond of their country and its institutions, glad to cherish any attempt on the part of their fellow-laborers to make their country rich in the refinements as well as the necessaries of life. But while we are progressing rapidly here, it will not hurt us to see and know how far they are ahead of us on the other side. We have, in two preceding articles, sketched several of the more prominent nursery establishments in the vicinity of the great metropolis, and now propose to enumerate a few further north and west, several large nurseries having become noted for the supply and cultivation of particular families of plants.

We have been to Messrs. Knight & Perry's, King's road, Chelsea, famous for Coniferæ and rare hothouse and greenhouse plants. We arrive, a little further on, at the nursery of Messrs. Whitley & Osborne, Fulham road, one of the oldest established of its class, and still maintaining a fair character for ornamental trees, shrubs and coniferæ—though we lately heard it remarked by an American dealer, that he was disappointed in visiting it. Certainly, he must have been, after being to some of the previously enumerated places. We have the Messrs. Rollison's nursery, of Tooting, rich in its collection of Orchids and Cape Heaths; also on the route, Mortlake, a village or little town on the way to Kew, is famous for its market gardens; and their asparagus beds, or fields, for extensive fields are filled with this valuable esculent, cultivated for the London market, distant about eight miles.

There are several ancient country seats in the locality, and close to Mortlake, about half a mile from the Kew gardens, is the house which was in our time appropriated to Sir Wm. Hooker—a mean specimen of government liberality; but old Mr. Aiton was then still alive, and pensioned handsomely on the fund which should have supported the acting and respected Director of the Royal Botanic Garden. We hope Sir William is better treated now. No doubt some of our readers will yet visit this place, and therefore we are a little accurate.—And right on the road to the gardens, by the margin of Kew Green, and over against Kew Church, in which are deposited tablets to the memory of many worthies, and amongst others Ferdinand Bauer, the accurate botanical draftsman, is the *chateau* (if such a term may be applied to a crowd of low buildings) of the Duke of Cambridge. The late duke was quite a homely man who had a word for every *Kew gardener* he met in his frequent perambulations through this extensive pleasure ground—for such it was to him, his rear entrance opening into it. Oh, a duke is a great thing in old England—much more a duke of the *Blood Royal*—and the unsophisticated countryman from the far north or extreme west, was much pleased to be asked by the old duke where he came from. But the duke is gone; and so is his elder brother, the King of Hanover, who lived opposite when at Kew, which was mighty seldom; and now the young Duke of Cambridge has "received the benefit of the dying" of another great duke; but they have it all to themselves, and we wish them much joy—that is, the loaves and fishes, and titles and glitter.

We commenced about gardens, and must end with them. Following the Richmond road we come to a Florist's ground, one Harrison, who once figured away amongst Pansies, Tulips, and all other florists' fancies, as he published the "Floricultural Cabinet," some copies of which we have seen in this city. Passing through the famous town of Richmond, on whose hill the poet Thomson sat and mused, overlooking the waters of the Thames and the pretty village of Twickenham, venerated as the scene of Alexander Pope's labors, and following the Thames, we arrive at Kingston, and find the nursery of Messrs. Jackson, the most celebrated depot for Cape Heaths within a great distance; the plants are generally found thrifty and healthy, and in great variety and abundance. We shall not stop to enumerate the Cape Heaths; we hope American gardens will soon be rich in this graceful and elegant genus, and that our *experimenting* correspondent will be attended to. There are in this neighborhood many fine country seats, such as Richmond House, and Twickenham Lodge, from which two places some of our correspondents learned a little of their horticultural experience; and they were not inferior schools, as the head gardeners

here are generally first class. Not far from this is Isleworth, where Beck, the Pelargonium grower resides, who is a dealer in slate work, and first introduced the use of slate tubs as a substitute for pots. He has made a great revolution in Geraniums, and was the editor of "Beck's Florist," now Turner's. Here we are right on the Duke of Northumberland's fine mansion and splendid conservatories—Syon House, gardener Mr. Ivison; and here was raised *Gloxinia Cartonii*, by the late gardener Mr. Carton. We shall not stop to speak of the riches of this collection; we are on the way to the great American nurseries of Knap Hill, Woking & Bagshot. The Knap Hill is the property of Hosea Waterer, and rich in Rhododendrons, Azaleas, Kalmias, Ledums, arborescent Heaths, &c., &c. Mr. Waterer exhibits his plants each season at a tent on his ground at Chelsea, where those who have not leisure or sufficient interest to lead them out to Knap Hill by the Southampton railroad, can feast their eyes on the beauties of the spring season. How gorgeous are the displays of Azalea and Rhododendron to be seen at Chiswick, Regent's Park and Hosea Waterer's grounds! Messrs. Standish & Noble are also on this route, and are enterprising importers of new and rare ornamental plants, especially Coniferæ, Rhododendrons and Azaleas. Fortune's novelties have found their way here, as *Cupressus funebris*, and others of its stamp. The Messrs. Standish are enterprising men. Another firm of the Waterer family are to be found at Bagshot, whose grounds are rich in the Ericaceæ; indeed, these plants seem to do better here than in any other locality, which arises from the nature of the soil and subsoil, which is entirely silver sand and peat in a great many places, so much so as to make the country around quite barren. We are not far now from Windsor—but perhaps our readers have had enough for this time, and we shall return to the subject again. R.R.S.

THE FARM ANIMALS.

One of the most useful, and in fact indispensible productions, animal or vegetable, provided for human use by the wonderful organisation of animal economy, is milk—pure and unadulterated milk.—It forms at once a harmless medicine, a strong and nutritive beverage, or the means of producing an article of food in universal demand. It must at once be evident then, that proper care and attention should be devoted to its production, in a good and pure state. We break in upon the economy of nature, and rob the mother of the food destined for her offspring, which we either destroy for use, or raise by other less expensive and artificial means. The milk, that valuable secretion provided by nature, we are too glad to obtain for our own immediate use. But so habituated do we become to the usual routine of daily

life in city and country; and so generally are the denizens of the city disposed to be satisfied with foreign beverages, that the subject of milk, except as a mere coloring to their tea and coffee, is little thought of—then the family is pleased to call it cream, and a small portion, a trifling dose, finds its way into our breakfast cup; so small indeed is the quota, that if it were generally worse than it is, it would not poison us omnivorous animals. We, however, have thought it right to ask our friends what this is that they generally use; whether it is cream or milk, or water and milk, or both, or neither, but they will not answer us, for they neither know nor care, at least many of them; and why should we be officious, or poke our fingers into our readers' coffee cups or milk pitchers. We do it from principle. 'Tis true, we may not yet have arrived at the unenviable condition of the London public, who have been exhibited to the civilized world, and to themselves, as consumers of the most loathsome material under the name of milk, hawked from dealer to dealer—decocted by this one, concocted by that—until the article called milk undergoes so many metamorphoses, that the consumer just takes it for granted that it is milk, or if it is not, it has a little of the color, or if not much of that, it will impart a color to his coffee or congou, and satisfy his visitors that at least the usual provision was made for the procuring of the article milk, or last and most soothing the final conclusion, that no better could be had. Oh no! we are far from this state of things in Philadelphia or New York. We do not hear continually of government employing chemists to analyse and report the increase or decrease of crime or fraud in this commodity, but we get along pretty smoothly, and receive most, if not all our milk, from the sweet healthy atmosphere of the country, and we prove at once that this is the case, for behold, we may see the milk waggon plodding along at all hours of the morning to the city, with its load, and jaded attendants, who have not a chance of resting at their proper time. How long the milk waggon will thus continue to make its visits we cannot say, for the country is every year becoming more distant, and alas, we fear cattle jobbers and milk jobbers will but too soon begin to make extensive city dairies, and bring our milk sheds to our doors. We are not without specimens already, but how soon and rapidly they will multiply. Our object then is merely to call attention to the proper treatment of the invaluable cow, the second mother of the human family, to crave for her wants a little more attention, to make her owners think that she too loves fresh air, fresh water, clean food and a clean bed, and that in doing this for her, she will duly reward them in return. We have seen cows carefully attended to, cleaned, aired, exercised, treated with clean food, provided with fresh and wholesome drink, preserved from noxious vapours by preserving around

them clean quarters, and after all it did not cost a great amount of extra labor—system is all that is wanted.

Begin at the beginning, construct proper sheds with facilities for cleansing, feeding, watering, airing; clean the stalls regularly; feed them like clock work, for the cow wants to eat just as regularly as we do, and much more so, for we are reasoning beings and can make allowance for deficiencies, but she is not so, and cannot, but is quite dependent on our attention. Water them regularly, taking care to rinse out the feeding trough, and give plenty of pure air, by removing out of contact with the breathing atmosphere, all filth made by the animals. We do not stop to enquire, can this be done, we have seen it done, and assisted in doing it, and it became after all a light and pleasant affair, when regularly attended to. The milk obtained from healthy animals treated carefully in the above particulars, would be milk in fact, and prove a very nutritive food for the members of the family, capable of conversion into infinite forms by proper skill. We grieve to see poor animals scarcely able to draw their limbs along, clogged as they are with their indurated excrements; breathing a filthy atmosphere almost destitute of oxygen—and one cow consumes a large amount of oxygen in a day—dragging out a miserable existence, fountains as they are of the very life-blood of society. We know there are some of these filthy cow hovels about our cities, but we know they can never be allowed to accumulate, free country as it is, for the public voice would cry out against them before they could reach half the magnitude which they attain in older countries. But do our farmers attend to the cleanliness and healthy condition of their cattle? They do not! Most assuredly there is a great deficiency in this respect; labor it is said is too high, "we cannot afford time to keep our cow houses like parlors, it is all humbug, leave us to mind our own business." But it is our business, and every man's business, to attend to the public health and public welfare; and every man should be allowed a voice in a matter so clearly connected with the very elements of health—pure and uncorrupted milk, pure from extraneous mixtures; uncorrupted by foul diseases, engendered by impure food and a fœtid atmosphere. We shall state clearly and concisely in our next paper, how this can be effected without a great expense of labour.

The Heath in America.

Mr. Editor—You are a very bold man—a very rashly bold man. Don't you know that poor Mr. Downing got himself in a very sad scrape amongst us poor practicals, for treading too hard on some of our corns? You must know sir, that gardeners are not like the congregation Dean Swift threw his book at. He pretended to point out

a very bad woman, particularized many of her imperfections; and, affecting to warm with his subject, threatened to throw his book at her brazen face, advising all the rest to hold down their heads lest he should hit the wrong one. But lo! they *all* held down their heads—there was not an imperfect woman amongst them—no, not one. With us it is just the reverse—show how a few of us are far behind the age, how we may improve ourselves, how good situations are injured by "bad mismanagement," and we each apply it to ourselves. *We* are of that "sham" set—we won't stand it. Sir, you are a very bold man, you not only try to mend our manners and better our ways—crushing our defective members with as little feeling as a surgeon lops off a broken leg—but you presume also to give those gentlemen a hint who expect their gardeners to "do up everything," repair old errors, restore old neglects; renovate, in fact, a killed-up place—without affording them reasonable means to effect it. How very rash! How do you know but that employers are like the others, and each fancy that you are pointing to him. But that is your look out. You say there are some indifferent gardeners, and some unreasonable employers. May your endeavors mend them—you speak of Heaths, and why don't we grow them like we have seen them at Chiswick? I will tell you, sir, if you will allow me. It is a well known fact that the Heath has been tried and tried again, and again by many first rate gardeners and has hitherto failed—without examining the matter it has been set down that the climate is "too hot for them." Certainly there is a great difference in the climates of London and Philadelphia. The mean temperature of the hottest month in the former being about 64½°, while the latter is considered at 77°. But although there is that great difference in favor of the climate of London, there is not so much difference between this and the Cape of Good Hope—the native country of the Heath. The mean temperature of the hottest month there is about 74°, so that in so far as mere temperature is concerned we are nearer to its natural state than the London grower is. Why the mean temperature of the whole year at the Cape is figured so high as 66°, or *higher* than the mean temperature of the *hottest month* in London, by a degree and-a-half. Mere temperature then has nothing to do with the failure to grow heaths in America. It arises from the fact of our sticking to the London system of management, fit only for a London climate.—Why, the "Horticulturist" informed us last summer that he saw no Heaths in England in general collections better than Breckenridge grows them at Washington. If only one experiment is successful, it shows that our "hot climate" is no obstacle, the thermometer at the Cape of Good Hope is said to be frequently as high as 100° in the shade, and I doubt whether it ever exceeds that at Washington. I had

in one situation I held in America eight young Heaths (two year old,) these I grew for two years with as much success as I ever did in Britain, though I was told when I started that they "could not be grown." I did not grow them in "all peat" as I used to do, I used full a third of turfy loam with them; I had found in a previous situation that it would never do to go in for peat to such an extent as I had been habituated; I knew that peat was mainly composed of vegetable matter; I knew that when vegetable matter was made to decompose rapidly, it had a highly injurious effect on whatever grew in it—and vegetable matter of all kinds does decompose rapidly when exposed to rapidly succeeding extremes, whether of heat or cold, drought or moisture. I found few of my peat plants do well, and on consideration the reason was obvious. The drought of our summers rendered repeated waterings necessary. These repeated waterings and alternate dryings, acting on the peat, produced the injurious acids alluded to, and the dryness of our days with the copious dews of our night, added to the effect. To mix loam with the peat was the first move I made in the path of progress; but this was not all—I found that by keeping them all the season in-doors, or under a raised frame, with all the air possible, I gained the power to a certain extent of keeping the atmosphere about them more regularly moist.

I am sorry that I have no Heaths now; I have never been able to learn the fate of my pets, but learned from them while I had them that the climate of America is not too hot for Heaths, but that by adapting soil and atmospheric moisture to the climate, they will do as well here as anywhere.

A Lover of Heaths, Phila.

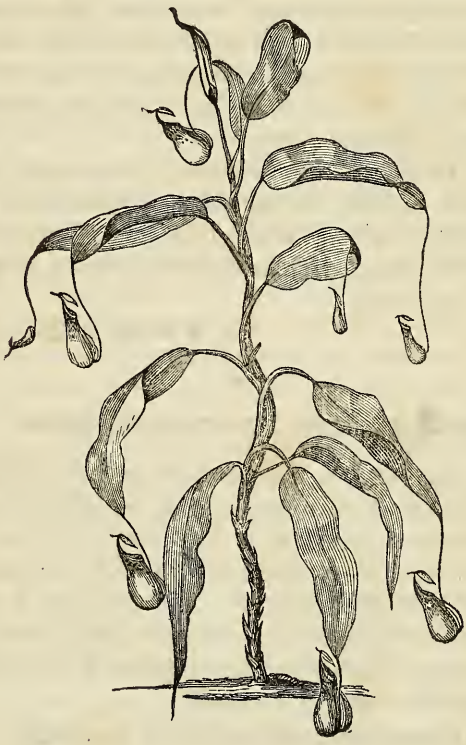
CURIOSITIES OF VEGETATION.

So great is the diversity of form in the vegetable kingdom, that many persons not at all interested in plants scientifically, or even as ornamental objects, are attracted by the curious formation of certain parts to examine and admire them, and perchance to enquire further into their history and characteristics. Thus provision is made to arrest the admiration and attention of the most thoughtless of mankind, and plans laid to lead them into a due reverence for the works of nature. Amongst these peculiar forms, the

NEPENTHES, OR PITCHER PLANTS,

stand prominently forward; and as several species have been generally introduced to collections, attention is again called to their peculiarities of habit and structure. The conservatories of our city can boast of the possession of only two species as yet, but it is to be hoped

others will ere long be added. There are several forms of plants possessing arrangements for the collection of water by certain appendages. We can enumerate the indigenous sarracenias of N. America, of which there are several; the *Cephalotus follicularis* of N. Holland, one species only being known of the genus, and the species of Nepenthes, distillatoria, Hookerii, lævis, sanguinea and Rafflesiana. Of these, *distillatoria* has been for a number of years in cultivation, and by care and attention in fertilisation, hundreds of plants have been produced from seed here and in Europe. The numerous visitors who frequent the extensive conservatories of James Dundas, Esq., Philadelphia, have no doubt observed them in great luxuriance, under the care of the persevering gardener, Mr. Bisset, who can now exhibit healthy and flourishing specimens of N. Rafflesiana and distillatoria. The wood cut given below was prepared from a drawing taken here by Miss Morris, and represents accurately the habit of Rafflesiana, of which we furnished a colored plate in a preceding number.



The peculiar process known as the pitcher is a dilatation of the petiole or leaf stalk, which by the approximation of its edges forms a follicular vessel, and is surmounted by an operculum or lid, recognised according to the rules of structural botany as the true leaf. The genus

is quite a peculiar one in its entire structure, and it has been a matter of difficulty to systematic botanists to assign it a proper place in natural systems. R. Brown, perhaps the best authority, brings it into association with *Aristolochias*, (the Dutchman's Pipe order, if we must anglicise terms,) the structure of the wood warrants him in this view of its affinities. Brogniart, however, differs with him, and is joined by Endlicher—both good authorities. It is not a matter of much moment to us, at present, how the question should be decided; we may rest satisfied in knowing that the tribe is a peculiar one, and demands care also in cultivation. The genus is bisexual, the stamens and pistils being borne on separate plants; pertect fertilisation, however, has been procured, as Mr. Bisset's seedlings of N. distillatoria testify. We regret that we could not induce him to put on paper for the benefit of our readers his experience in the cultivation of this interesting family; but while he imparts his knowledge freely, though orally, he refuses to enter the lists as a horticultural writer. He grows his pitcher plants in a warm and moist Orchid house, strikingly adapted to both tribes of plants, and pots them in peat mixed with chopped sphagnum. The atmosphere of the house is the great point to be attended to, as in other respects there is not much peculiarity in their management. N. distillatoria is of a twining habit, its stems being slender, and is supported by twining the tendril of the pitcher around some support, such as a wire trellis. It seems to be supported in its native habitat, the swamps of China and East Indies, by seizing on those reed-like plants generally found in such situations; and thus the pitcher, when filled with water, is supported erect. N. Rafflesiana is more erect and robust in habit, and is by far the handsomer species. The other pitcher plants, such as Sarracenia, are well known in America, and flourish in the swamps of New Jersey, Carolina, Florida, and other States.—S. purpurea is the most familiar species to northern botanists. The New Holland Pitcher Plant (Cephalotus follicularis) has not yet been introduced to American collections, as far as we can learn; it is an extremely pretty little plant, of the habit of Sarracenia or Dionæa, and referred to that portion of the natural system. It bears crowds of perfect little pitchers close to the ground. The first plant was, we believe, introduced to Kew Gardens in 1847 or 1848, and has not as yet been widely diffused. Its culture is much the same as that of *Dionœa muscipula*, or Fly trap of the Southern States. R.R.S.

The Cultivation of the Vegetable Garden.

Trenching, Manuring, &c. In the proper cultivation of the soil, draining is unquestionably the foundation for future improvement, but it is not by any means the only requisite. Proper tillage or

working the soil—giving back through the medium of manures the ingredients extracted by continual cropping—and a proper system of rotation in crops are all equally essential to remunerative success.—The importance of deepening and pulverising the soil, is pretty generally recognised by all good cultivators. Our forefathers recognised the principle in their summer fallowing, and more modern ingenuity has brought the subsoil plough to its aid. We also read of one Jethro Tull, who maintained that pulverisation was the only requisite to secure a succession of bountiful crops. The theory upon which these practices are founded has of later years been properly explained. Since vegetable chemistry has been recognised as a branch of natural philosophy, and become the subject of scientific research, most important truths have been discovered, errors in practice corrected, and causes of failure made clear; true principles deduced, and results arrived at which were hitherto considered unattainable; but the difficulty of arriving at principles of universal applicability becomes apparent when we consider the various influences to which vegetation is constantly subjected; the modifying effects of climate and atmosphere; the different combinations of the elements constituting the soil; and above all, the limited knowledge concerning the laws of vitality, and the influence that vegetable life has in rendering these elements subservient to its use. Neither can it be doubted that the occasional discrepancies between the deduction and application of scientific principles arises from the fact, that the requisite knowledge to deduce and apply is seldom combined in the same individual, and while the scientific man reproaches the practical cultivator for his indifference to the revelations of science, and his prejudice for old established customs, the latter reminds him of the want of harmony among men of science, and the varied opinions held by them upon the same subjects. It has also been remarked, that behind even the most extravagant and fantastic prejudices, it is seldom that there is not some lurking truth upon which they are founded, of undoubted and indisputable value.

Both science and practice agree in confirming the beneficial results of the frequent exposure of soil to the air, disintegrating the mineral bases and rendering it a fit medium for the ramification of roots. But it is not on the surface alone that these preparations are necessary, roots must be enticed down, and this is only to be effected by deep aeration. Trenching is undoubtedly the most thorough process of loosening and deepening the soil. The advantages of this operation are various; the surface soil that has been exhausted by continual cropping, is replaced by a portion of subsoil enriched with the nutritive matters that have naturally sunk and been washed down by rains from the surface, and carried beyond the reach of the roots; the

manures applied are more freely incorporated with the soil, and their action becomes more regular and uniform. A free passage is given to heavy rains, and, in consequence, the surface is sooner dried and fitted for the performance of necessary work. The roots of plants can extend into a medium where they are exempt from the extremes of drought and heat, and obtain a more regular supply of nurishment, being neither so likely to suffer in wet, or burned up in dry weather, as in the former case the surplus passes freely down, and in the latter is drawn up by capillary attraction, more especially where a judicious system of surface stirring is persevered in, preventing rapid surface evaporation.

Notwithstanding that deep trenching will ultimately prove beneficial in all soils, (premising they are sufficiently drained, for it matters not how deep they are trenched if roots are prevented from descending by retained water,) attention must be given to the nature of the subsoil, if of a ferruginous character it will not be immediately productive. We are informed by chemists that oxygen, which we are accustomed to consider as a gas, forms nearly one-half of the whole solid crust of the globe. In the subsoil it exists in combination with metallic substances, injurious to vegetation. But on sufficient exposure to the action of air, frost and rain, such earths are generally very favorable to the growth of vegetables. In the management of soils of this description, it is of much importance to turn them over frequently, exposing new surface, and bringing the hitherto excluded earths to the action of the atmosphere—frost is a valuable auxiliary in this improvement. The water in freezing expands and separates the earthy particles, on the return of mild weather a gradual crumbling and granulation takes place; the meliorating action of the atmosphere thus pervades every part, producing a friability not attainable by any other means. It is a matter of regret that so little attention is given to this gratuitous fertilizing property of the atmosphere. There are very few soils actually deficient in inorganic materials, were they duly exposed to the oxygen of the air, their latent principles of fertility would then be rendered available for the purposes of vegetable growth. In connection with the amelioration of adhesive soils, the use of charred materials may be mentioned — As a corrective, charcoal cannot be too highly recommended. In a physical view it renders the soil porous and permeable to gases, and chemically its absorbing and disinfecting properties are equally valuable. Its capability of absorbing ammonia and other gases give it value as a fertilizer; reduced to a powder and mixed with seed before sowing secures a speedy and healthy development of the young plant.

There has been much discussion lately regarding the relative value

and economy of fresh and decomposed manures. Much depends upon the nature of the soil, and the species of crop for which it is to be applied. For early crops remaining only a short time in the ground it should be well decomposed, that its action may be of immediate benefit. On the other hand for more permanent and lasting crops, it may be used in a fresh and more bulky state, in which case its action will be more protracted. When ground is accasionally trenched to a depth of eighteen inches or more, it is a good practice to lay five or six inches of fresh manure in the bottom of the trench. This in the mean time will entice roots to descend, and when the soil is again tnrned over it will be in the best possible condition for enriching the surface. This system of trenching and manuring deeply is particularly suitable for esculent roots as carrots, parsnips, &c. On thin soils these cannot be cultivated to any advantage, and when the superficial soil is rich, a tendency to emit root fibres near the surface is induced, detrimental to their longitudinal extension.

Rotation of Crops.—Among the essentials requisite to a high state of cultivation, a proper system of rotative cropping accupies a a prominent place. It is a frequent error, more especially committed by those with small gardens, to cultivate the same kink of crop successively on the same piece of ground. Success under this method might be constantly secured by returning to the soil the several ingredients extracted by the plants; but even supposing this practically attainable, and looking at it as a matter of mere economy, a change of crop is desirable, as two dissimilar crops may be produced on the same piece of ground in one season. a practice not attainable to any extent without a change of crop; and further, the growth and cultivation of one kind of plant frequently gives the soil the best preparation for that of a different sort of vegetable. Physiologists do not altogether agree in their opinions upon the principles on which the beneficial effects of change of cropping depends. What may be termed the excretory theory proceeds on the supposition that the roots of all plants during their growth give out certain substances peculiar to themselves, and unfavorable to their growth upon accumulation, but which are capable of promoting and acting as stimulants to the growth of other species.

It is a well ascertained fact that plants do impart to the soil a portion of the juices they have formed within themselves. The soil round the roots of the oak has been found impregnated with tannin. The roots of the sponge imparts an acid resinous matter. The poppy exudes a snbstance analogous to opium; indeed, the root of any plant, if growing in water, will soon render it turbid, but the quantity of such matter hitherto detected has not been considered of sufficient import to account for the remarkable beneficial results which has followed a rotation of crops.

The above theory although supported by very high authority, is gradually giving way to the following, viz: That although the bulk of plants is made up of the same primary elements, yet, different species require very unlike proportions of these elements, so that each kind of plant has a characteristic formation peculiar to itself. There is considerable variety in this respect among the different tribes of plants, each seeming to grow most advantageously when supplied with ingredients abounding in their distinguishing elements. It follows, then, that if the various substances required by a plant for its healthy growth, are deficient in the soil, that plant will not thrive, although a plant of different formation may grow luxuriantly upon it. From this it appears that the reason why a crop if constantly grown upon one spot, will yearly diminish in productiveness, does not arise from a repletion of any substance, but rather from exhaustion; and that the same crop may be successfully grown upon the same soil for an indefinite number of years, by annually supplying those elements extracted by the crop. This might be practicable if the exact amount of these substances were known, but so far as present knowledge extends there is no accurate, practically useful information on the subject, sufficient to warrant its adoption. In a practical view it is evident from either of the above theories, that a change of crop is an essential requisite to successful cultivation.

In cultivating garden vegetables, there is ample room and facilities for a frequent change of crop, and it may also be remarked that there is a wide field for experiment in ascertaining the kinds best suited to succeed one another in a regular system. In general, long-rooted plants as beets, carrots, parsnips, &c., should be followed by those that root near the surface, and if the manure applied to the former crops has been put well down, it will, on the soil being again turned over, bring its remains in a position for immediate benefit to the latter.

Plants that are grown for their seeds, should be followed by those grown for their leaves. The seeds of all plants contain a larger amount of mineral ingredients than their leaves, and will in consequence exhaust the soil to a greater extent than crops used before the seed ripens. Early summer crops should be followed by those to be used in the fall and winter. In reducing these into practice, two methods may be adopted; either by having only one crop at a time, and when that is removed, immediately succeeded by another; or, have two or more crops on the same patch, so arranged, that the one will be removed before it interferes with the growth of the other. In illustration of the first mode, a piece of ground may be sown with early peas, which will be cleared off in time for a crop of turnips, beets, or spinach, or, a crop of early potatoes succeeded by a plant-

ing of winter cabbage, or brocoli. Early crops of turnips, carrots, and beet, will be removed in time to admit of a planting of late dwarf beans; many modifications and resources will present themselves in practice. Perhaps the most economical method, especially where ground is limited, is to grow several crops at the same time; for instance, peas may be sown in March, in rows six feet apart—in May a row of melons may be planted in the space between the peas, the shade afforded by the peas will be beneficial to the young melon plants—or between the peas, a row of bush beans may be planted—when the pea crop is gathered, the space it occupied may be planted with purple brocoli; and the beans succeeded by a late crop of turnips. It would be easy to multiply examples, but it is not necessary, as those who are inclined, and will exercise due foresight, will find room for many expedients. Much can be produced on a small scale by adopting this method, and it affords great facilities for sheltering young and tender crops, by those more matured and of robust growth. It may, however, be remarked, that although most plants are benefitted by a little shade and shelter when young and delicate, it is highly injurious to their healthy development if continued.

SOLANUM TUBEROSUM.

CULTIVATION OF THE MUSHROOM.

The following brief notes have been prepared for the readers of the "Florist." If you deem them suitable, they are at your service.

Formation of the Bed.—Collect a quantity of fresh horse droppings from the stable where oats are fed to them; shake out or separate the droppings from the straw, after which fermentation will commence; they should then be spread out under an open shed or some such place, to the depth of a foot; then collect a fourth part of cow droppings from an old pasture which may be half dry; spread them regularly over the horse droppings, and keep turning the whole every alternate day until the excessive heat subsides or is exhausted, which may be a week or ten days, according to the state of the atmosphere. Select a warm cellar or stable, or if there is space under the greenhouse stage it will suit, if it can be preserved from drops falling from the stage. In England they are grown on shelves placed in the stable or in sheds erected for the purpose in the stable; no other heat is applied except that imparted by the horses' breath. The bed should be constructed two feet in depth by making a box, varying in width and length according to the taste or judgment of the grower; introduce the droppings, making them as solid as possible by beating and treading to a depth of 16 or 18 inches; after which a renewed and violent heat is in some instances generated; in such case I use a stake or garden dibble, which

I drive down towards the bottom of the bed at about a distance of 15 inches over the bed which form air chambers for the escape of steam and vapour, which is injurious to the action of the spawn; after this, the heat will decrease rapidly. When the bed has reached a proper temperature the spawn may be inserted in holes made by a mallet or other suitable instrument, to the depth of two or three inches, then close the air chambers with the mallet, and the spawn will be in immediate operation. I never add soil to a bed until I see the spawn in motion, then I collect some *maiden* soil from a loamy sod which has not been broken for many years, and cover the bed to the depth of 3 or 4 inches, and beat it firm with a spade, covering it over with hay or boards to keep it dark and make the mushrooms white. Watch the bed closely, never giving water but when nearly dry, and then it should be heated to a moderate temperature. From such a bed which I spawned on the 16th of January 1852, I cut a dish in five weeks, and the bed remained in bearing for three months, during which time I cut some bushels of mushrooms. It contained about six square yards. I renewed it in November, and spawned it on the 15th of the same month, and will furnished my employer with a dish of mushrooms on Christmas day.

W. Hammill, Woodbrook.

Mr. Editor—I wish to hear again from your correspondent at page 200, if he was very sure that the vineyards between Orleans & Nantes, on the banks of the Seine, were planted with white and rose Chasselas. I have seen vineyards from near Lyons to Paris, through Burgundy, then to Rheims, Champagne, &c., and I have never seen nor heard of the Chasselas grown in vineyards to make wine; but if he says so, I will believe him. My impression was that these grapes were only cultivated for the table, and are unknown to most of the vine dressers. The mistake, if any, must be attributed to the uncertainty of observations by steam.

M.

A machine for transplanting large trees was lately tested at Edinburg in presence of a body of gentlemen interested in horticulture. It is arranged with cutters, which are inserted at a distance from the trunk, and then forced to meet underneath, cutting the earth in the form of a wedge. Arrangements are made for the removal of the tree when disconnected; and from the success of the first experiment no doubt is entertained of its utility. It is supposed the weight removed amounted to thirteen or fourteen tons. The inventor is Mr. McGlashan.

The Florist and Horticultural Journal.

Our labours for the completion of the first volume of the Florist being well nigh finished, we propose to take a glance at the past and to speculate a little on the future success of the periodical. Being a novice in editorial affairs, we are well aware of the short comings and errors which marked the volume now about to close. The only reason we can advance for projecting such a Magazine is this—that no qualified individual seemed disposed to undertake the matter, and we were most anxious that Philadelphia, and Pennsylvania, should possess a practical Horticultural periodical. The experience of the past proves to us that there is sufficient taste and spirit to support such a periodical; all that is wanting is time and means to produce a valuable affair. We may congratulate our readers on having secured the services of many of the most competent horticulturists, who freely give the result of their experience for the encouragement of the science; and we can promise for the coming volume an increase of talented contributors amongst scientific men. The desire which exists in distant parts of the Union for a good and reliable guide in the several operations of gardening has been manifested, and it shall be our care to furnish them with such information as will be best suited to their wants. The notice which persons begin to take of our indigenous plants, encourages us to devote a space to the subject of the Indigenous American Flora, and from the facilities which we enjoy of examining valuable herbaria, we hope to be able to satisfy the enquiries of all who take the pains of forwarding proper specimens for determination. This subject has always engaged much of our time and attention. On the subject of Fruit and Fruit Trees we have been rather limited throughout the past year, but the assistance of several eminent pomologists having been procured, we hope in the future to remedy that defect. With respect to the social questions which are closely connected with our subject, involving the improvement of our gardeners, we have never shown any disposition to refuse to them that consideration which is due to a matter so important; and we may here state that it has been far from our purpose to create any sectional jealousies bebetween the various classes of which the body of practical horticulurists is composed. Placed as we are here to fulfil our destiny, we do not believe that the question of particular country where we had our origin is at all relevant. During the progress of our undertaking we have no doubt offended certain individuals, and thus entailed on ourselves opposition; if such arose from an independent criticism of public acts of public bodies, we submit that we were entitled to that

inestimable privilege, and hope that in exercising it we have not overstepped the proper limits. The opposition created by such a course we hope to overcome and survive. We are not disposed to enter into the peculiar instances where this opposition was incurred, as doing so would only tend to attach undue importance to an unsuccessful attempt to control free opinion, which no honorable individual would sanction.

We have to return our sincere thanks to our contributors who have done so much to make the FLORIST a valuable guide in the routine of operations connected with the Farm, Orchard, Flower Garden and Conservatory, and to express our sense of the obligations we owe for the invaluable information furnished on any required topic. Gardeners have done much for the FLORIST, both as contributors to its pages and as agents, and all gratuitously, with no hope or prospect of reward, except the extension of their favorite pursuit.

We shall not here make any promises with regard to the forthcoming volume; it will speak for itself; and as the past has been only the initiation of the matter, we expect that those who have benefitted by our exertions, and are favorable to the project, will continue their support.

R.R.S.

A BOTANIC GARDEN.

There was once a Botanic Garden in the vicinity of Philadelphia: It was created by the enthusiasm of a genuine naturalist, but it did not long survive its founder and director; it is no longer a botanic garden, but the residence of a wealthy merchant of Philadelphia, who has spent no pains or expense in modernising it; and now, with a splendid mansion, and neat lawn and gravel walks, it forms an attraction to the visitor more generally appreciated perhaps than John Bartram's garden, filled with botanic novelties and gems, little cared for by the mass, who look with more interest on a stately pile of masonry than on a rare tree or shrub. But as our country progresses in scientific knowledge the taste for such evidences of refinement increases, and the necessity for intellectual recreation becomes as pressing as the more sensual demands have heretofore been. There can be little doubt but that in a few years a Public Botanic Garden will be projected, if not by some society or corporation already in existence, it may be by some spirited company of gentlemen associated for the purpose.

We are informed that a proposition was once made to the Pennsylvania Horticultural Society to purchase Bartrams' garden for this

purpose, and that terms were held out of more than usual encouragement; and indeed, we believe that the general opinion amongst those conversant with the matter, is that something should have been done by that society to preserve these grounds sacred to botanical science, and the memory of the man who imparted so great an interest to them. That it was the duty of the Penn. Hort. Society to make some move in the matter of a Botanic Garden, has been long felt by a majority of its members; and at one time we believe proceedings were entered into to effect that object. It is not our purpose here to enquire what causes operated against the attempt so as to lead to its abandonment; the renewal of it is the important matter for their consideration. In other communities not so intelligent or enterprising as ours, companies have been organised and Botanic Garden's established by subscription, and such have succeeded well and flourished. A similar course could be pursued here. If a number of enterprising men would take the matter up, a self-sustaining public Horticultural and Botanical Garden could be established which would prove creditable to Philadelphia and the Union. Then the numerous plants and seeds, and interesting objects in natural history, collected from time to time by the correspondents and others, would be preserved and securely deposited where they would afford gratification to the public; and our expeditions now content with writing a report of what they have seen, would collect a rich harvest of botanical and zoological specimens, knowing that there was provided for them a proper receptacle. Our society could then put at once into cultivation the valuable seeds and plants which are received as donations, and the donors would be further encouraged to collect and forward rare seeds and roots. By this means such an expedition as that lately despatched to Japan would be a source of botanical riches not now appreciated. R. R. S.

☞ Our subscribers would oblige us by letting us know at as early a day as possible their intentions with regard to the next year. Our first number will be issued as soon as possible—nothing but the plates will delay us. We hope that all our friends will exert themselves to procure as many additional subscribers as possible.

☞ We have to request our contributors to favor us with their communications as early next month as convenient to ensure their prompt insertion.

TO CORRESPONDENTS.

Mr. Wm. O'Brien's communication was received.

All communications relating to the "Florist" to be addressed to the "Editors, No. 63 Walnut st., Philadelphia."

J. McDonald, Pensacola, is thanked for the valuable hints he has communicated in that distant locality. We are very anxious to obtain such information as will guide us in our efforts to make our periodical a general guide to Horticulture throughout the Union. Florida, we know is rich in indigenous plants. We have received a beautiful Sarracenia, a Mimosa, and we believe Gelsemium nitidum, or Carolina jasmine, of the latter only a single flower was forwarded without foliage—being a practical man and interested in scientific botany you could do much for the promotion of the science there. We stated in July last, that our periodical would circulate from Canada to Florida, and such is now the case.

Rev. J. M. S., Kenansville, Duplin County, N. C. We shall receive with thanks the plant of your seedling Rose, and shall have it tested carefully. Our subscription for the ensuing volume is to be $2. We will furnish you with back numbers from August, and add your name to our new list. A copy is allowed gratis to all who obtain 10 subscribers.

Hon. M. P. Wilder's favor has been received. Also, that of Jas. S. Negley, Pittsburg; Mrs. T. P. D.; Bernard Fox, Cambridge Port, Mass; Wm. Chorlton, Staten Island.

Louis Neumann, Jardin des Plantes, Paris. We shall comply with your request as to native plants. We are in the region of the Sarracenia, Goodyera, Chimaphila, Podophyllum, and many other interesting plants, and shall be happy to exchange with you.

Geo. McHattie is thanked for the list of subscribers from Pittsburg. We shall be obliged by his acting as agent there.

L. Lutterloh's favor has been duly received—the back numbers 1, 2, and 3, are out of print. We would gladly reprint them if we could obtain a sufficient number of subscribers to cover the expenses—we have opened a list for that purpose.

As much expense is incurred in collecting subscriptions, we have decided on charging $2 50 to all subscribers not paying in advance, as the low price of the periodical requires us to spare expenses of this kind.

Terms $2 a year in advance—$2 50 at the end of the year. One copy will be supplied gratis to any one forwarding ten subscriptions—10 per cent.

A correspondent wishes to hear something on the cultivation of the rose, and what are the best perpetual sorts. We will give it in our next number if we have room.

☞ Advertisements from persons in the trade are solicited at an early date.

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Leaves deacidified with magnesium methoxide. Resewed on linen cords, new all-rag end paper signatures, unbleached linen hinges & leather headbands. Rebound in quarter Russell's oasis morocco with hand marbled paper sides & vellum corners. Leather treated with potassium lactate & neat's foot oil & lanolin. January 1976.

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